



an agency of the
Department of Arts and Culture

PERMIT REPORT

FINAL PERMIT REPORT

Please submit your permit reports to the following e-mail address:

apmpermitreports@sahra.org.za

-Export & Destructive Analysis-

Archaeological – final destructive sampling/permanent export

Complete only those sections which are relevant to the specifics of the activities conducted under the issued permit.

GENERAL INFORMATION

(Applies to all permits)

A. Title Page:

Must include the following:

- Title of report: **Progress report, Permanent Export Permit for Dating and aDNA**
- Permit Number: **1987**
- SAHRIS Case ID: **6784**
- Author of report: **Mattias Jakobsson & Helena Malmström, submitted by Marlize Lombard**
- Date of report: **December 2020**
- Name of SAHRA permit officers on permit: **Phillip Heine**



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- Date of permit issue: **10/03/2015**
- Report due date: **April 2016**
- Expiry date of permit: **30/04/2016**
- Permit Holder - as on permit: **Marlize Lombard, University of Johannesburg**
- Permit To: **Mattias Jakobsson, Uppsala University**
- Name of locality/site(s): **National Museum Bloemfontein**
- Object ID's (or batch ID) reflected on the permit: **Batch Case ID 6784**

B. Executive Summary:

We collected 111 samples for a-DNA analysis from 37 human individuals and 7 sets of faunal remains, and 38 samples for radiocarbon dating. Decision on which bone elements to sample was made in close collaboration with the Museum curator (Dr. Brink). DNA samples consisted of approximately 200 mg of bone powder and radiocarbon samples consisted mainly of 2x2 cm bone pieces. The sampling was done on location and the bone elements were directly returned to the curator. All samples were transported by Dr. Malmström and Ms Coutinho to the Jakobsson Lab's Ancient DNA Laboratory in Uppsala. We have obtained AMS radiocarbon dates and IRMS isotope values (d13C and d15N) for 37 of the 38 human and faunal samples that were sent to Beta Analytic in the UK (these samples were completely utilized and no material is left after dating). DNA samples have been extracted (143 extracts in total) using silica-based methods and the bone powder has been fully digested. We have prepared 543 DNA libraries for large-scale Illumina sequencing. After bioinformatics processing, we have established the presence of authentic ancient DNA in 21 of the 37 human specimens, giving us a success rate of 57%. The genome coverages range from 0.01X to >22X in an individual who were placed in Matjes River rock shelter 5,500 years ago. Remarkable is also that we retrieved >4X genome coverage from an individual who lived >10,000 years ago. We now have data on the genetic sex of 19 individuals, mtDNA haplogroups for 23 individuals and Y-chromosomal haplogroups for four of the males. We are currently performing several analyses such as Principal Component Analyses (PCA), Admixture, as well as D- and f_x-related statistics to understand the ancestries of these individuals and their relation to present-day populations and previously published ancient individuals. Copies of publications resulting from this work will be submitted to SAHRA as soon as they become available.

C. SAHRIS Object or Site Links:

Batch Case ID 6784 (132 +38 samples)

From: <http://www.sahra.org.za/sahris/objects/object-042-not-individually-accessioned>

To: <http://www.sahra.org.za/sahris/objects/nmb-1448>

D. Location Details:

- Location name(s);NA
- GPS coordinates;NA
- Adequate mapping;NA
- Nearest town;NA
- Local District;NA
- Magisterial District;NA
- Province;NA
- Formation/Subgroup/Group (for palaeontological specimens);NA
- Approximate age of materials.**200-10000 years old**

E. List of all Participating Researchers:

- Provide a list of all participating researchers/excavators/technicians involved in the project, their qualifications and their affiliated institutions (for excavations or collection the crew should be listed per season).

Marlize Lombard, PhD Archaeology, University of Johannesburg

Mattias Jakobsson, PhD Genetics, Uppsala University

Helena Malmström, PhD Evolutionary Biology, Uppsala University

Carina Schlebusch, PhD Human Genetics, Uppsala University

Alexandra Coutinho, PhD student in Evolutionary Biology, Uppsala University

Hanna Edlund, PhD lab manager, Uppsala University



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F. Curation of Materials:

(Does not apply to Filming and Maintenance permits)

- Name of institution (where the material will be accessioned or is accessioned and will be returned to); **Jakobsson Laboratory, Uppsala University (samples are not accessioned, but destroyed during analysis)**

- Name of curator;

Helena Malmström

- Contact details of the curator;

E-mail:

Helena.malmstrom@ebc.uu.se

Phone: +46 707 442 444

- Institutional address;

**Department of
Organismal Biology
Uppsala University
Norbyvägen 18C
SE-75236 Uppsala
SWEDEN**

- Institution/facility where the material will be sent to and corresponding details as outlined above (for export permits).

Samples for ancient DNA:

Jakobsson Lab, aDNA lab

**Department of
Organismal Biology
Uppsala University
Norbyvägen 18C
SE-75236 Uppsala
SWEDEN**

Samples for C14 dating:

**Beta Analytic Limited
London BioScience Innovation Centre
2 Royal College Street
London NW10NH
United Kingdom**

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How is the material being curated (number of boxes/bags, type of bags, accession list etc.)?

At the Florisbad Quaternary Research Station, National Museum Bloemfontein, 132 bone powder samples (ca 200 mg) was taken from the human and animal specimens, to use for DNA analyses. Thirty-eight small piece of bone (2x2 cm) were sawed off from the specimens, to use for radiocarbon dating. The specimens were returned to the Museum after sampling. All samples (bone powder in 1.5 ml plastic tubes and small bone pieces in plastic zip-lock bags) were transported to the ancient DNA laboratory at Uppsala University in Sweden by Helena Malmström. DNA is subsequently extracted from the bone powder and the bone powder will dissolve completely during the process. Radiocarbon samples were sent to Beta Analytical in the UK for radiocarbon dating where the samples were completely utilized (no material left). Remaining bone powder has been fully digested during DNA extractions.

SPECIFIC INFORMATION

(Separate sections relate to specific permit types)

G. Palaeontological Collections and Excavations: NA

H. Archaeological Research Collections and Excavatio



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I. Destructive Analysis:

The specimens were sampled between the 7th to 17th of July 2015, at the Florisbad Quaternary Research Station, National Museum Bloemfontein. The skeletal material was taken out by the curator, Dr. James Brink. The sampling strategy for each specimen was discussed in detail with Dr. Brink prior to sampling. Ancient DNA researcher Helena Malmström performed the sampling together with PhD student Alexandra Coutinho. A portable lab was set up in a separate room at the Research Station. The bone elements chosen for DNA sampling were UV irradiated and placed in a bleach-decontaminated sampling tent (Figure 1). Tiny holes (approximately 2-5 mm) were drilled using a Dremel drill and ca 200 mg of bone powder was collected from the interior. Teeth were wiped with bleach and water and the sampling was done on the roots (see Figure 2) to keep the outer morphology intact. The petrous portion of temporal bones was sampled via the carotid canal in case of complete crania (see Figure 3). Long bones and other bone elements were sampled in the least intrusive areas (Figure 4 and Figure 5). Samples for radiocarbon dating were either retrieved by sawing off approximately 2x2 cm pieces of bone (Figure 6), or, for specimens where it was important to keep more of the outer morphology, by drilling out bone powder.



Figure 1. Sampling on location was performed in a dedicated ancient DNA sampling tent.

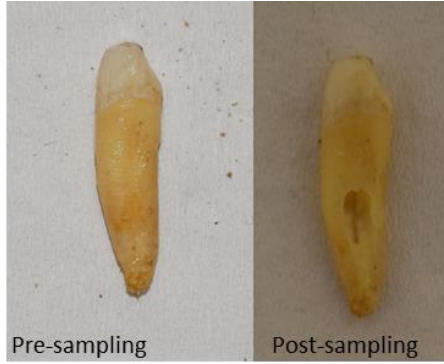


Figure 2. Example of a human tooth before and after DNA sampling.

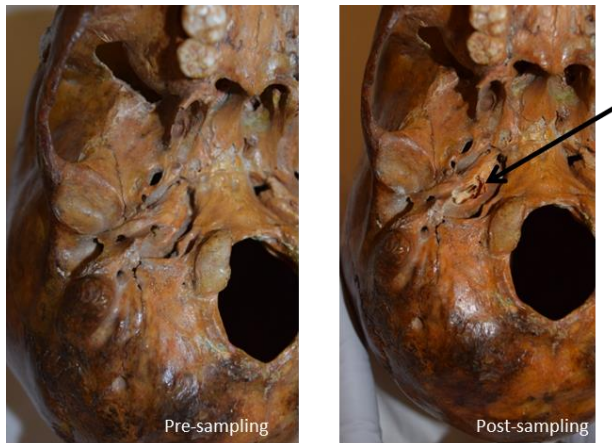


Figure 3. Example of crania before and after DNA sampling of temporal bone.



Figure 4. Example of long bone before and after DNA sampling.



Figure 5. Example of horn core before and after DNA sampling.



Figure 6. Example of a radiocarbon sample taken from a fibula.

The skeletal elements were then returned to Dr Brink. The bone powder was collected in plastic 1.5 ml tubes and the bone pieces for radiocarbon dating was collected in plastic zip-lock bags and transported by Helena Malmström and Alexandra Coutinho to the Jakobsson Lab ancient DNA laboratory at Uppsala University. The radiocarbon samples were sent to Beta Analytical in the UK for bone collagen extraction and subsequent AMS radiocarbon dating and IRMS isotope analyses ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) and the samples were completely utilized (no material left). Thirty-seven of the 38 human and faunal samples were successful with ages from 10,000 years ago to present time and with varying isotope signatures (Table 1). The radiocarbon sample that failed was a piece of horn core from a bushbuck.

Table 1. AMS radiocarbon dates and IRMS isotope ratios

Beta C14 ID	Lab ID	Conventional age	Calibrated age (95.4% probability)	IRMS d13C	IRMS d15N
429965	flo038b4C14	CANCELED	na	na	na
429964	flo033b4C14	220 +/- 30 BP	Cal AD 1650 to 1875	-12.3	15.5
429963	flo020b4C14	410 +/- 30 BP	Cal AD 1450 to 1625	-7.9	14.1
429962	flo017b4C14	270 +/- 30 BP	Cal AD 1630 to 1800	-17.1	17.3
429961	flo042b4C14	5220 +/- 30 BP	Cal BC 4040 to 3955	-24.6	3.9
429960	flo041b4C14	6060 +/- 30 BP	Cal BC 4995 to 4835	-12.8	5.6
429959	flo040b4C14	930 +/- 30 BP	Cal AD 1045 to 1220	-11.6	5.1
429958	flo039b4C14	8990 +/- 30 BP	Cal BC 8250 to 7990	-9.2	5.2
429957	flo037b4C14	3920 +/- 30 BP	Cal BC 2465 to 2210	-11.9	5.1
429956	flo036b4C14	3730 +/- 30 BP	Cal BC 2190 to 1975	-10.9	17.3
429955	flo035b4C14	130 +/- 30 BP	Cal AD 1680 to Post 1950	-8.5	10.3
429954	flo034b4C14	410 +/- 30 BP	Cal AD 1450 to 1625	-10.4	14.2
429953	flo032b4C14	270 +/- 30 BP	Cal AD 1630 to 1800	-19.2	16.5
429952	flo031b4C14	580 +/- 30 BP	Cal AD 1390 to 1435	-11.8	13.1
429951	flo030b4C14	170 +/- 30 BP	Cal AD 1670 to Post 1950	-11.7	16.3
429950	flo029b4C14	860 +/- 30 BP	Cal AD 1180 to 1275	-13.8	9.8
429949	flo028b4C14	170 +/- 30 BP	Cal AD 1670 to Post 1950	-12.7	15
429948	flo027b4C14	770 +/- 30 BP	Cal AD 1230 to 1300	-9.8	15.7
429947	flo026b4C14	1910 +/- 30 BP	Cal AD 65 to 225	-24.4	12.8
429946	flo025b4C14	1920 +/- 30 BP	Cal AD 60 to 215	-9.9	12.8
429945	flo024b4C14	2260 +/- 30 BP	Cal BC 380 to 200	-10	9.6
429944	flo023b4C14	1590 +/- 30 BP	Cal AD 425 to 585	-9.7	12.4
429943	flo022b4C14	170 +/- 30 BP	Cal AD 1670 to Post 1950	-8	13.5
429942	flo021b4C14	5360 +/- 30 BP	Cal BC 4245 to 4045	-17.3	9
429941	flo019b4C14	430 +/- 30 BP	Cal AD 1445 to 1620	-10.3	13.5
429940	flo018b4C14	2230 +/- 30 BP	Cal BC 360 to 150	-13	16.4
429939	flo016b4C14	4630 +/- 30 BP	Cal BC 3490 to 3195	-13.6	14.6
429938	flo015b4C14	550 +/- 30 BP	Cal AD 1400 to 1445	-12.2	13.4
429937	flo014b4C14	2350 +/- 30 BP	Cal BC 405 to 360	-16.5	13.2
429936	flo013b4C14	450 +/- 30 BP	Cal AD 1440 to 1610	-26.7	
429935	flo012b12C14	4840 +/- 30 BP	Cal BC 3645 to 3520	-15	11.9
429934	flo012b8C14	2840 +/- 30 BP	Cal BC 1010 to 895	-20.1	16.7
429933	flo012b4C14	6100 +/- 30 BP	Cal BC 5035 to 4850	-14.2	16.3
429932	flo011b4C14	4860 +/- 30 BP	Cal BC 3650 to 3530	-14.9	16.4
429931	flo009b4C14	3150 +/- 30 BP	Cal BC 1435 to 1285	-15	12.8
429930	flo006b4C14	9020 +/- 30 BP	Cal BC 8275 to 8205	-14.8	14.4
429929	flo005b4C14	5560 +/- 30 BP	Cal BC 4445 to 4330	-13	17.4
429928	flo001b4c14	6990 +/- 30 BP	Cal BC 5895 to 5740	-14.4	14.4

The bone powder collected for DNA analyses is extracted either as in (Yang et al. 1998) with modifications as in (Malmström et al. 2007) or as in (Dabney et al. 2013). This process leaves no bone powder since it gets fully digested. DNA libraries are prepared using either a blunt-end protocol (Meyer and Kircher 2010, Günther et al. 2015), a single-strand protocol (Meyer et al. 2012, Gansauge and Meyer 2013) or a protocol that repair post-mortem deaminated sites (Briggs and Heyn 2012). The libraries were sequenced at SciLife Sequencing Centre in Uppsala using Illumina HiSeq XTen with paired end 150 bp chemistry.

In total, we have prepared 111 DNA samples from the 37 human remains. Between 1-7 DNA extracts have been prepared from each individual. A total of 592 DNA sequencing libraries have been prepared, of which 115 were blunt-end libraries sequenced for screening of ancient human DNA (Meyer and Kircher 2010, Günther et al. 2015). We have established the presence of authentic ancient DNA (> 1% human DNA) in 55% of the 111 DNA extracts that initially were used for screening. In order to increase genome coverage 20 additional DNA extracts were prepared and for samples where the proportion of human ancient DNA were >2%, sequencing libraries were prepared using protocol that repair post-mortem damages (Briggs and Heyn 2012). A total of 331 libraries were prepared and sequenced using this protocol. For DNA libraries where the proportion of human ancient DNA was <2%, 129 additional blunt-end libraries were prepared in order to increase sequence depth. Where no authentic ancient DNA could be established using blunt-end library protocol, a special protocol targeting shorter DNA fragments was used in attempts to generate data that could be analyzed (Meyer et al. 2012, Gansauge and Meyer 2013). DNA libraries with low clonality have additionally been re-sequenced. All sequenced libraries are displayed in Table 2 (Table 2 is placed at the end of this report. Note that many DNA libraries have been re-sequenced, i.e. sequenced more than once in order to read every single unique ancient DNA fragment that was present in the DNA library).

We also had 21 DNA samples from 7 animal remains. We have mapped sequenced data from these animals to the human genome and from this, we can conclude that they were not contaminated with human DNA.

Data from all sequencing libraries has been bioinformatically processed. Adapters were trimmed and pair-end reads were merged using Adapter Removal v.2.1.7 (Schubert et al. 2016), using the default Illumina adapters and collapsing reads

when an 11 base-pair overlap is found. For some libraries two added Ns was used to trim and merge instead of the normal default adapters. Bwa aln 0.7.17 (Li and Durbin 2009) was used to map the reads as single end reads to the human reference (build hg19 with rCRS mitochondria). Non-default parameters for bwa were -l 16500 -n 0.01 -o 2 (Skoglund et al. 2013). Reads longer than 35 base-pairs and with less than 10% mismatches to the reference were kept for further analysis. Biological sex were determined as described in (Skoglund et al. 2013). It uses reads with a mapping quality of at least 30 and calculates a ratio of reads mapping to the Y chromosome and to those reads mapping to both X and Y chromosomes. To ensure maximal retention of reads the sample was merged (using samtools v.1.5 (Li et al. 2009)) to library level before removal of PCR duplicates with a modified version of FilterUniqSAMCons_cc.py (Kircher et al. 2012), which ensures random assignment of bases in a 50/50 case. Reads with identical start and end positions are identified as PCR duplicates and collapsed. To control for deamination patterns damage plots were produced (Sawyer et al. 2012). Read length plots were produced using 2 000 000 random reads or less. Mitochondrial consensus sequences were extracted using samtools v.1.5 (Li et al. 2009) and bcftools v1.5. Bases with a coverage lower than three were set to N. Mitochondrial haplogroups were then determined using HaploGrep v.2.1.16 and Phylotree build 17 (Weissensteiner et al. 2016). To estimate mitochondrial contamination, two different methods were used: Green (Green et al. 2009) and contamMix (Fu et al. 2014). Green gives the estimated contamination while contamMix gives the estimation of authentic reads. Y-chromosome haplogroups were called using single base substitutions from Phylotree (version 09/03/2016) (van Oven et al. 2016) were called from bam files mapped to hg 19 using Samtools v.1.3 (Li et al. 2009).

We have merged the sequence data from each individual (Table 3). As some libraries had aDNA damages repaired, and that dataset can be analyzed differently compared to the other libraries, we kept damage-repair data in one bam file and non-damage repair in another. We have, as described earlier, investigated the authenticity of the data by analyzing damage-patterns, average read lengths, and various contamination estimates and mt- and Y-chromosome haplogroups (Tables 2-5, Figure 7) and the majority of our data have the characteristics associated with aDNA data.

Table 3. Genomic summary table of merged data aligned to the human reference genome

LabID	Data type ¹	Object code	Provenance	Genome coverage	mtDNA coverage	mtDNA haplogroup	Genetic sex assignment	Authentic DNA ²
flo001	be	NMB 006	Matjes River (burnt layer), Western Cape, not dated	1.07	274	L0d2a1	XX	0.952 - 0.999
	dr			10.02	30	L0d2a1	XX	0.971 - 0.992
flo002	be	NMB 1241A	Matjes River (surface ash layer), Western Cape, C14 age ~2970 bp	0.22	34	L0d1a1a	XX	0.908 - 0.993
flo003	be	NMB 1271	Matjes River (base Mytilus layer), Western Cape, C14 age ~3570 bp	0.74	47	L0d1a1a	XX	0.978 - 0.995
	dr			10.84	991	L0d1a1a	XX	0.918 - 0.995
flo004	be + ss	NMB 1281	Matjes River (W4), Western Cape, C14 age ~7420 bp	na	na	na	na	na - na
flo005	be	NMB 1310	Matjes River (btw top and lower Mossel Bay), Western Cape; no date	0.009	30	L0d3b1	na	0.887 - 0.997
flo006	be	NMB 1311	Matjes River (base of Mossel Bay), Western Cape, no date	0.17	16	L0d2b1a	XY	0.899 - 0.999
	dr			4.83	361	L0d2b1a	XY	0.994 - 0.999
flo007	be + ss	NMB 1342	Matjes River (MR 1), Western Cape; C14 age ~9688	na	na	na	na	na - na
flo008	be + ss	NMB 1437	Matjes River (Wilton), Western Cape; C14 age ~4940 bp	na	na	na	na	na - na
flo009	be	NMB 1441	Matjes River (Wilton); no date	0.001	14	L0d2c1	XX	0.895 - 0.992
flo010	be + wgc	NMB 1448	Matjes River (uncertain); C14 age ~7295 bp	0.13	6	L0d1c	na	0.775 - 0.998
flo011	be	not acc	Matjes River (Wilton Upper), Western Cape; not dated	2.00	99	L0d3b1	XX	0.983 - 0.999
	dr			20.18	1003	L0d3b1	XX	0.978 - 0.983
flo012-1	be	not acc	Matjes River (Wilton Grave 1), Western Cape, not dated, mandible 1	na	na	na	na	na - na
flo012-2	be	not acc	Matjes River (Wilton Grave 1), Western Cape, not dated, mandible 2	na	na	na	na	na - na
flo012-3	be	not acc	Matjes River (Wilton Grave 1), Western Cape, not dated, mandible 3	na	na	na	na	na - na
flo013	be + ss	not acc	Matjes River (MR 158 1), Western Cape; not dated	na	na	na	na	na - na
flo014	be	NMB 1202	Great Brak River Cave, Western Cape; no age	0.45	23	L0d1a1b	XY	0.905 - 0.999
	dr			7.16	348	L0d1a1b	XY	0.967 - 0.991
flo015	be	NMB 1207A	Hartenbos, Western Cape; no date	0.03	2	L0d2a1	XY?	0.513 - 0.995
	dr			0.16	10	L0d2a1	XY	0.691 - 0.997
flo016	be	NMB 1319	Plettenberg Bay (Look-out), Western Cape; not dated.	na	na	na	na	na - na
flo017	be	NMB 1347	Saldanha Bay, Western Cape; no date	na	na	na	na	na - na
flo018	be	NMB 0085	Cape St Francis, Eastern Cape; not dated	0.37	21	L0d2a1	XY	0.908 - 0.999
	dr			8.07	474	L0d2a1	XY	0.974 - 0.991
flo019	be	NMB 1829	Alice District, Eastern Cape; not dated	0.01	38	L0g	na	0.971 - 0.997
flo020	be	NMB 1830	Somerset East, Eastern Cape; not dated	na	na	na	na	na - na
flo021	be	NMB 1833	Alice District, Eastern Cape, not dated	na	na	na	na	na - na
flo022	be	NMB 0025	Blanco, Free State; not dated	0.02	7.36	L0d1a1b1a	na	0.772 - 0.994
flo023	be	NMB 0052	Springbokvlakte, Free State; not dated	0.29	20	L0d2a1a	XX	0.910 - 0.999
	dr			6.07	404	L0d2a1a	XX	0.983 - 0.996
flo024	be	NMB 0062	Leeudoringstad, Free State; not dated	na	na	na	na	na - na
flo025	be	NMB 0063	Molenhoek, Free State; not dated	0.03	1	L0d2a1	XX	0.434 - 0.994
flo026	be	NMB 0065	Riet River, Free State; not dated	0.30	21	L0d2a1a	XX	0.899 - 0.998
	dr			3.55	254	L0d2a1a	XX	0.967 - 0.990
flo027	be	NMB 1198	Koffiefontein, Free State; not dated	0.05	5	L0d1a1a1	XX	0.489 - 0.995
flo028	be	NMB 1567	Phillipolis, Free State; not dated	na	na	na	na	na - na
flo029	be	NMB 1635	Morokasvlug, Free State; not dated	0.26	10	L0d2a1	XX	0.785 - 0.998
	dr			0.57	26	L0d2a1	XX	0.900 - 0.996
flo030	be	NMB 1655	Vaalbank, Free State; not dated	0.07	5	L0d3b1	XX	0.775 - 0.998
	dr			0.45	25	L0d3b1	XX	0.942 - 0.999
flo031	be	NMB 0014	Houdenbek, Northern Cape; not dated	0.10	5	L0d2c2	XX	0.782 - 0.998
	dr			0.01	0.7	L0d2c2	XX	0.403 - 0.993
flo032	be	NMB 1383	Augrabies, Northern Cape; not dated	0.13	28	L0d1a1a	XY?	0.948 - 0.999
flo033	be	NMB 1407	Abrahamsdam, Northern Cape; not dated	0.14	22	L0d2a1a	XY	0.926 - 0.999
flo034	be	NMB 0079	Bushveld, Limpopo	0.43	24	L0d1b2b	XX	0.931 - 0.999
flo035	be	NMB 0090	Waterpoort, Limpopo; not dated	na	na	na	na	na - na
flo036	be + ss	not ind acc	Matjes River (Layer B), W Cape, not dated, Arctocepalus femur (MR)					
flo037	be + ss	not ind acc	Matjes River (Layer B), W Cape; not dated, Syncerus caffer calcaneus (MRBX)					
flo038	be	ind not acc	Matjes River (Layer B), W Cape, not dated, Tragelaphus scriptus horn core (MRB)					
flo039	be	not ind acc	Matjes River (Layer C), W Cape; not dated, Redunca arundinum horn core (MR)					
flo040	be	not ind acc	Matjes River (Layer C), W Cape; not dated, Syncerus caffer atlas (MR)					
flo041	be	not ind acc	Matjes River (Layer D), W Cape; not dated, Syncerus caffer talus (MR)					
flo042	be	not ind acc	Matjes River (Layer D), W Cape; not dated, Tragelaphus scriptus mandible (MRD4)					

¹Data type: be is blunt-end library data; ss is single-strand library data; wgc is whole-genome-capture library data; dr is UDG treated damage-repair library data

²Proportion of authentic ancient DNA as measured by Contamix (Fu et al. 2014)

HaploGrep v 2.1.16 and Phylotree build 17 was used to determine mtDNA haplogroups [17, 8].

Table 4. Y-chromosomal haplogroup assignment

Y-chromosomal		
Sample ID	haplogroup	SNPs with derived stated
flo014	A1b1b2a	L1116, L1120, L1130, L1135, L1098, M229, Z11918, Z17896, L1053, L1013, Z11892, Z11899, V221, L985, V238, M9410, M5798, PF2276, V156, V56, Y2986, BY451, Y4010
flo015	E1b1b1	L1116, Z17896, L1013, M9081, M9228, M9262, M9295, PF961, PF210, M5607, PF1442, PF2276, Z837, PF2009, PF1635, PF1716, PF1882, FGC6230
flo018	A1b1b2a	L1116, L1120, L1130, L1135, L1098, M229, Z11918, Z17896, L1053, L1013, Z11892, Z11907, Z11899, V221, L985, V238, F3643, PF2276, Y6224, V156, V56, Y2986, BY451, Y4010, L348.3
flo033	E1b1b1b2	L1098, Z17896, M9124, M9343, Z17365, M11760, Z17710, PF821, PF1046, M5649, M5609, Z837, PF1724, PF1871, PF1894, PF1901, FGC6230

Table 5. Additional contamination estimates based on mtDNA (Green et al. 2009) and X chromosomes in males (Rasmussen et al. 2011, Korneliussen et al. 2014).

Sample ID	Avg. RL	Contamination			Xchrom	SE
		Green	verifyBAM (Freemix)	verifyBAMid (AVD_DP)	Contamination Method 2	Xchrom cont
flo014.be_90perc_libr_200527.merge	58.4	3.160	0	0.48	0.011	0.006
flo014.drp_90perc_libr_200527.merge	55.1	2.516	0.02389	7.73	0.013	0.001
flo015.be_90perc_libr_200527.merge	68.8		0	0.03	0.000	0.000
flo015.drp_90perc_libr_200527.merge	65.2	6.587	0	0.18	0.042	0.019
flo018.be_90perc_libr_200527.merge	63.4	2.978	0	0.4	0.027	0.010
flo018.drp_90perc_libr_200527.merge	57.9	1.647	0.02693	8.73	0.016	0.001
flo019.be_90perc_libr_200527.merge	71.5	0.993	0	0.02		
flo022.be_90perc_libr_200527.merge	66.0	0.000	0	0.02		
flo023.be_90perc_libr_200527.merge	58.8	0.0	0	0.3		
flo023.drp_90perc_libr_200527.merge	52.5	0.624	0.0243	6.46		
flo025.be_90perc_libr_200527.merge	60.5		0	0.03		
flo026.be_90perc_libr_200527.merge	68.9	0.034	0	0.31		
flo026.drp_90perc_libr_200527.merge	60.8	2.097	0.0143	3.8		
flo027.be_90perc_libr_200527.merge	56.0	15.254	0.08624	0.05		
flo029.be_90perc_libr_200527.merge	60.7	1.724	0	0.27		
flo029.drp_90perc_libr_200527.merge	54.0	9.539	0	0.61		
flo030.be_90perc_libr_200527.merge	61.4	0.0	0	0.07		
flo030.drp_90perc_libr_200527.merge	55.6	3.762	0.048	0.47		
flo031.be_90perc_libr_200527.merge	66.8	1.136	0	0.1		
flo031.drp_90perc_libr_200527.merge	66.9		0	0.01		
flo032.be_90perc_libr_200527.merge	61.4	0.617	0	0.14	0.000	0.000
flo033.be_90perc_libr_200527.merge	71.3	2.184	0	0.15	0.067	0.029
flo034.be_90perc_libr_200527.merge	64.9	1.31147540984	0	0.45		
plo001.be_90perc_libr_201127.merge	70.4		0	0		
plo001.dr_90perc_libr_201127.merge	61.9		0	0.01		
plo002.be_90perc_libr_201127.merge	64.4		0	0.01		
plo002.dr_90perc_libr_201127.merge	56.4	0.000	0	0.03	0.192	0.000
plo005.be_90perc_libr_201127.merge	89.3	17.073	0	0.01		
tob001.be_90perc_libr_201127.merge	90.0	1.651	0	0.02		
tob002.be_90perc_libr_201127.merge	65.2	0.901	0	0		
tob005.be_90perc_libr_201127.merge	82.7	18.075	0.04051	1.15		

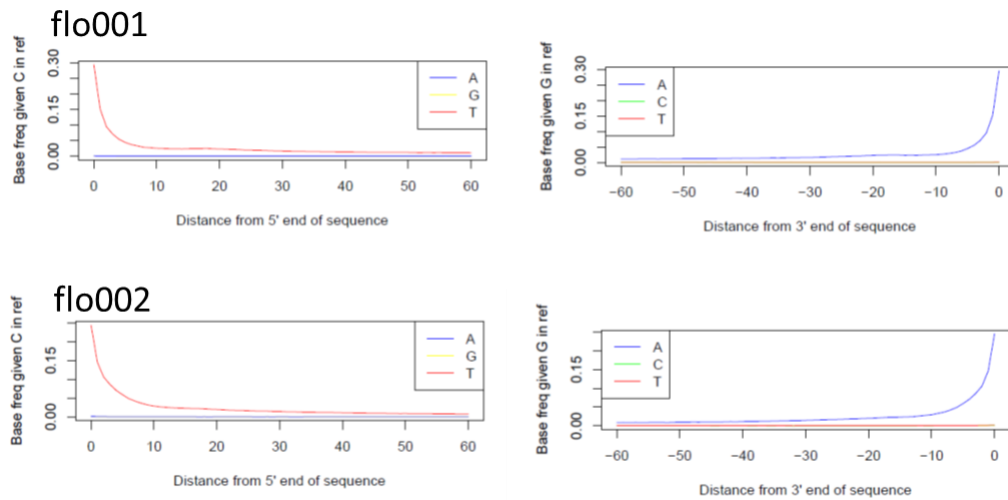


Figure 7. Example of damage patterns in data from flo001 and flo002.

We have retrieved analyzable amounts of genomic DNA data from 21 of the 37 human individuals (i.e. 57% success rate), with the highest genome coverage being at 22.18X (combined blunt-end and damage-repair data) (Table 3). We have been able to assign mitochondrial haplogroups to 23 of the individuals, and 22 of these belonged to L0d-haplotypes while one belonged within L0g. We have further analyzed the genetic sex of 19 of the individuals and of these 13 were female. This far, we have established Y-chromosomal haplogroups for four of the males, and two fall within A1b and two within E1b-lineages (Table 4). Further population genetic analyses are ongoing. These include e.g. Principal Component Analyses (PCA), Admixture, as well as D- and f_x -related statistics to understand the ancestries of these individuals and their relation to present-day populations.

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J. Permanent Export:

Permanent export permit for the purposes of destructive analysis, see details in previous sections.

K. Conservation/Maintenance: NA

L. Filming Permit: NA

M. Phase II Mitigation: NA

Table 2. Basic statistics for all sequenced human DNA libraries

Sample	Library	File	Seq_date	Merged seqs	Human seqs	Proportion human DNA	Average		Too short reads	Genome cov	MtDNA cov
							read length	Clonality (%)			
fio001	fio001-b2e114dr	fio001-b2e114drp2_TCAGCTT_S6_L003_ARmerged,180615_ST-E00216_0252_AHLCLLCCXY.all	6/15/2018	123689696	11502573	0.1152	60.0	30.9	7.68	0.167	5.10
fio001	fio001-b2e112dr	fio001-b2e112drp2_AGAAGAC_S4_L003_ARmerged,180615_ST-E00216_0252_AHLCLLCCXY.all	6/15/2018	134352186	12996170	0.1168	60.3	28.8	7.86	0.191	6.02
fio001	fio001-b2e115dr	fio001-b2e115drp2_AGAGCGC_S7_L003_ARmerged,180615_ST-E00216_0252_AHLCLLCCXY.all	6/15/2018	124564881	11532386	0.1113	59.4	27.7	8.89	0.167	5.12
fio001	fio001-b2e113dr	fio001-b2e113drp2_GTCCGGC_S5_L003_ARmerged,180615_ST-E00216_0252_AHLCLLCCXY.all	6/15/2018	132678768	12775073	0.1145	60.3	28.0	7.61	0.188	5.80
fio001	fio001-b1e112dr	fio001-b1e112drp1_CTCCGATG_S21_L006_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	115252523	10053799	0.0988	65.9	24.7	5.64	0.166	4.37
fio001	fio001-b1e113dr	fio001-b1e113drp1_GCTCGAA_S22_L006_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	116098099	10350116	0.1022	65.2	24.3	6.89	0.170	3.97
fio001	fio001-b1e114dr	fio001-b1e114drp2_AAGCTAA_S27_L007_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	124269454	11054976	0.1003	65.8	22.6	7.15	0.184	4.60
fio001	fio001-b1e115dr	fio001-b1e115drp2_GACGGCG_S28_L007_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	119188289	10593084	0.0994	66.6	21.5	7.41	0.179	4.50
fio001	fio001-b2e115dr	fio001-b2e115drp1_TTGATC_S32_L008_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	108911113	10429417	0.1156	60.8	28.6	7.90	0.155	5.15
fio001	fio001-b2e114dr	fio001-b2e114drp1_ACTATCA_S31_L008_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	112803567	11159051	0.1196	61.4	29.3	7.12	0.168	5.17
fio001	fio001-b1e113dr	fio001-b1e113drp2_TACTTAG_S26_L007_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	130618113	11888705	0.1017	65.5	22.0	7.07	0.197	4.92
fio001	fio001-b1e114dr	fio001-b1e114drp1_ACCAACT_S23_L006_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	131254629	11377536	0.1005	65.4	25.2	6.92	0.187	4.68
fio001	fio001-b1e112dr	fio001-b1e112drp2_ATACTGA_S25_L007_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	143360087	12683302	0.0981	66.2	22.7	5.77	0.212	5.32
fio001	fio001-b1e115dr	fio001-b1e115drp1_CCGGTAC_S24_L006_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	134111213	11317738	0.1014	66.1	27.5	6.97	0.188	4.76
fio001	fio001-b2e113dr	fio001-b2e113drp1_TTGAAGT_S30_L008_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	126390977	12500496	0.1194	61.6	29.6	6.77	0.188	5.95
fio001	fio001-b2e112dr	fio001-b2e112drp1_AACTCCG_S29_L008_ARmerged,180608_ST-E00274_0228_AHLFT3CCXY.all	6/8/2018	129486749	12853688	0.1191	61.6	28.7	7.15	0.194	5.75
fio001	fio001-b1e212dr	fio001-b1e212drp1_AGCCCTG_S12_L005_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	90731576	7470751	0.0950	60.8	29.2	4.55	0.111	2.98
fio001	fio001-b1e214dr	fio001-b1e214drp1_GCAAGAA_S14_L005_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	90824975	6983205	0.0958	63.2	35.9	3.08	0.107	2.63
fio001	fio001-b1e212dr	fio001-b1e212drp1_AGCCCTG_S12_L007_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	91061947	7365161	0.0948	61.0	30.4	4.45	0.109	2.73
fio001	fio001-b1e112dr	fio001-b1e112drp1_CTCCGATG_S16_L008_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	114555648	9844868	0.0977	65.3	25.1	5.70	0.161	3.96
fio001	fio001-b1e212dr	fio001-b1e212drp1_AGCCCTG_S12_L006_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	91264177	7622110	0.0950	60.8	28.0	4.64	0.113	2.90
fio001	fio001-b1e215dr	fio001-b1e215drp1_AGAATTA_S15_L005_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	101192653	8183186	0.0947	63.0	30.4	3.99	0.126	3.20
fio001	fio001-b1e214dr	fio001-b1e214drp1_GCAAGAA_S14_L007_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	90731584	6903147	0.0956	63.3	36.5	3.02	0.106	2.79
fio001	fio001-b1e213dr	fio001-b1e213drp1_CCAACT_S13_L005_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	109621964	8741995	0.0952	62.5	32.0	3.97	0.133	3.20
fio001	fio001-b1e214dr	fio001-b1e214drp1_GCAAGAA_S14_L006_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	94318115	7290145	0.0959	63.0	35.6	3.12	0.111	2.75
fio001	fio001-b1e113dr	fio001-b1e113drp1_GCTCGAA_S17_L008_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	115820091	10157516	0.1011	64.6	24.7	6.98	0.165	4.11
fio001	fio001-b1e215dr	fio001-b1e215drp1_AGAATTA_S15_L006_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	101830764	8354720	0.0945	62.9	29.1	4.06	0.129	3.28
fio001	fio001-b1e215dr	fio001-b1e215drp1_AGAATTA_S15_L007_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	101575467	8070748	0.0945	63.1	31.6	3.88	0.125	3.11
fio001	fio001-b1e211dr	fio001-b1e211drp1_AATAAGC_S11_L005_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	111933911	8901850	0.0942	62.3	31.6	3.87	0.135	3.20
fio001	fio001-b1e211dr	fio001-b1e211drp1_AATAAGC_S11_L007_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	111961659	8763553	0.0940	62.4	32.6	3.78	0.133	3.41
fio001	fio001-b1e211dr	fio001-b1e211drp1_AATAAGC_S11_L006_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	113070712	9095997	0.0942	62.3	30.6	3.93	0.138	3.41
fio001	fio001-b1e213dr	fio001-b1e213drp1_CCAACT_S13_L006_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	110118895	8909821	0.0952	62.5	30.8	4.04	0.136	3.49
fio001	fio001-b1e115dr	fio001-b1e115drp1_CCGGTAC_S19_L008_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	130006951	10829049	0.1000	65.6	27.5	7.06	0.178	4.44
fio001	fio001-b1e213dr	fio001-b1e213drp1_CCAACT_S13_L007_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	109873385	8619912	0.0952	62.7	33.1	3.88	0.132	3.28
fio001	fio001-b1e114dr	fio001-b1e114drp1_ACCAACT_S18_L008_ARmerged,180309_ST-E00280_0182_BHHJMKCCXY.all	3/9/2018	130068085	11094309	0.0996	64.9	25.7	6.96	0.180	4.53
fio001	fio001-b1e112dr	fio001-b1e112drp1_CTCCGATG_S1_L001_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	112683504	9688769	0.0967	65.8	24.2	5.58	0.160	3.98
fio001	fio001-b1e114dr	fio001-b1e114drp2_AAGCTAA_S7_L002_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	119198988	10478960	0.0990	65.4	22.6	7.12	0.173	4.17
fio001	fio001-b1e113dr	fio001-b1e113drp1_GCTCGAA_S2_L001_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	113857290	9995635	0.1000	65.1	23.8	6.86	0.164	3.96
fio001	fio001-b1e115dr	fio001-b1e115drp2_GACGGCG_S8_L003_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	115019716	9991022	0.0988	66.2	23.1	7.18	0.167	4.38
fio001	fio001-b1e115dr	fio001-b1e115drp2_GACGGCG_S8_L002_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	115590178	10186522	0.0989	66.1	21.9	7.35	0.170	3.70
fio001	fio001-b2e115dr	fio001-b2e115drp1_TTGATC_S12_L004_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	110009827	10535214	0.1108	60.0	25.0	8.57	0.155	4.72
fio001	fio001-b1e114dr	fio001-b1e114drp2_AAGCTAA_S7_L003_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	118484710	10275818	0.0992	65.6	24.1	6.92	0.170	4.12
fio001	fio001-b1e113dr	fio001-b1e113drp2_TACTTAG_S6_L002_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	127428709	11482865	0.1008	65.1	22.2	7.02	0.189	4.91
fio001	fio001-b1e115dr	fio001-b1e115drp1_CCGGTAC_S4_L001_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	127951578	10685833	0.0990	66.1	26.6	6.96	0.177	4.24
fio001	fio001-b1e112dr	fio001-b1e112drp2_ATACTGA_S5_L003_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	138015852	11922383	0.0972	66.0	24.2	5.64	0.198	4.69
fio001	fio001-b2e114dr	fio001-b2e114drp1_ACTATCA_S11_L005_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	111805199	10927011	0.1144	60.7	26.7	7.63	0.163	4.87
fio001	fio001-b2e115dr	fio001-b2e115drp1_TTGATC_S12_L005_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	109280739	10305838	0.1105	60.1	26.1	8.42	0.152	4.71
fio001	fio001-b1e112dr	fio001-b1e112drp2_ATACTGA_S5_L002_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	138931682	12167049	0.0970	65.8	22.8	5.78	0.202	4.78
fio001	fio001-b2e114dr	fio001-b2e114drp1_ACTATCA_S11_L004_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	112767025	11181110	0.1146	60.6	25.6	7.77	0.166	5.24
fio001	fio001-b2e114dr	fio001-b2e114drp2_TCAGCTT_S15_L007_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	114965168	11353268	0.1131	60.6	24.7	7.95	0.169	5.26
fio001	fio001-b2e112dr	fio001-b2e112drp1_AACTCCG_S9_L005_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	125910563	12391022	0.1145	61.0	26.1	7.66	0.186	5.80
fio001	fio001-b1e113dr	fio001-b1e113drp2_TACTTAG_S6_L003_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	127102291	11282406	0.1011	65.2	23.8	6.83	0.185	4.39
fio001	fio001-b1e114dr	fio001-b1e114drp1_ACCAACT_S3_L001_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	127321716	10904919	0.0986	65.3	24.7	6.85	0.179	4.47
fio001	fio001-b2e113dr	fio001-b2e113drp1_TTGAAGT_S10_L004_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	123776200	12356073	0.1146	60.8	25.5	7.39	0.185	5.68
fio001	fio001-b2e114dr	fio001-b2e114drp2_TCAGCTT_S15_L006_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	115999317	11119076	0.1132	60.6	27.3	7.65	0.165	5.30
fio001	fio001-b2e112dr	fio001-b2e112drp2_AGAAGAC_S13_L007_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	128002068	12997204	0.1147	60.9	23.5	8.01	0.195	6.10
fio001	fio001-b2e115dr	fio001-b2e115drp2_AGAGCGC_S16_L007_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	120332815	11626253	0.1097	59.9	23.2	8.98	0.171	5.39
fio001	fio001-b2e113dr	fio001-b2e113drp1_TTGAAGT_S10_L005_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	123123629	12098758	0.1143	60.9	26.6	7.24	0.181	5.73
fio001	fio001-b2e112dr	fio001-b2e112drp2_AGAAGAC_S13_L006_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	128572803	12696930	0.1146	61.0	25.8	7.75	0.190	5.99
fio001	fio001-b2e113dr	fio001-b2e113drp2_GTCCGGC_S14_L006_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	129138346	12666996	0.1127	60.9	25.5	7.47	0.189	6.08
fio001	fio001-b2e112dr	fio001-b2e112drp1_AACTCCG_S9_L004_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	126757284	12669040	0.1148	60.9	25.0	7.81	0.190	5.84
fio001	fio001-b2e115dr	fio001-b2e115drp2_AGAGCGC_S16_L006_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	120340768	11342953	0.1095	60.0	25.1	8.73	0.166	5.21
fio001	fio001-b2e113dr	fio001-b2e113drp2_GTCCGGC_S14_L007_ARmerged,180309_ST-E00280_0181_AHH7WYCCXY.all	3/9/2018	128445926	12950699	0.1129	60.8	23.2	7.71	0.194	5.98
fio001	fio001-b1e214p1	fio001-b1e214p1dr_GCAAGAA_S18_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	14237194	1499931	0.0913	58.6	5.3	4.02	0.023	0.60
fio001	fio001-b1e211p1	fio001-b1e211p1dr_AATAAGC_S15_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	17362781	1797018	0.0903	59.9	5.8	4.45	0.027	0.63
fio001	fio001-b1e212p1	fio001-b1e212p1dr_AGCCCTG_S16_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	19082359	1974523	0.0906	59.2	5.8	5.05	0.029	0.72
fio001	fio001-b1e215p										

flo002	flo002-b1e214	flo002-b1e214p2_CAGCATC_S131_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	25741323	200534	0.0091	84.3	28.9	3.77	0.004	0.58
flo002	flo002-b1e213	flo002-b1e213p2_AGAATTA_S130_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	31761530	250116	0.0091	87.3	27.9	3.44	0.006	0.67
flo002	flo002-b1e214	flo002-b2e114p2_CCTCTAG_S133_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	52983342	699908	0.0157	67.8	36.9	2.63	0.011	1.97
flo002	flo002-b2e113	flo002-b2e113p2_TTCTAGG_S132_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	26047009	404541	0.0166	67.8	28.3	2.93	0.007	1.38
flo002	flo002-b2e213	flo002-b2e213p2_CCGGATA_S134_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	28629049	419050	0.0174	71.5	35.9	2.16	0.007	1.30
flo002	flo002-b2e214	flo002-b2e214p2_GCCGCCT_S135_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	58641283	550688	0.0176	68.0	62.4	2.00	0.008	1.41
flo002	flo002-b1e112	flo002-b1e112p3_GACTTCT_S142_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	26038247	417580	0.0186	83.4	29.9	1.79	0.009	1.07
flo002	flo002-b1e112	flo002-b1e112p2_GCAGAA_S129_L008_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	29592129	484481	0.0199	80.4	33.7	2.00	0.010	1.09
flo002	flo002-b1e214	flo002-b1e214p1_AACCTGC_S38_L005_merged,160906_ST-E00215_0119_BHWNVKKCCXX	9/6/2016	10094938	620983	0.2241	95.2	89.4	0.02	0.008	2.93
flo002	flo002-b2e114	flo002-b2e114p1_TAGGCCG_S39_L005_merged,160906_ST-E00215_0119_BHWNVKKCCXX	9/6/2016	9774678	724684	0.2186	88.8	87.8	0.01	0.008	5.54
flo002	flo002-b2e213	flo002-b2e213p1_GGCATAG_S40_L005_merged,160906_ST-E00215_0119_BHWNVKKCCXX	9/6/2016	10300218	461721	0.1617	87.5	90.7	0.04	0.005	3.84
flo002	flo002-b2e114	flo002-b2e114p1_TAGGCCG_S39_L005_merged,160906_ST-E00215_0119_BHWNVKKCCXX	9/6/2016	9774678	724684	0.2186	88.8	87.8	0.01	0.008	5.54
flo002	flo002-b2e214	flo002-b2e214p1_TTCAACC_S41_L005_merged,160906_ST-E00215_0119_BHWNVKKCCXX	9/6/2016	21741389	647247	0.2701	77.9	97.9	0.00	0.004	2.45
flo002	flo002-b1e113	flo002-b1e113p1ss_CCGGTAC_S4_L001_merged,160902_D00458_0161_AC9FERANXX	9/2/2016	2542511	7622	0.2793	64.6	97.8	1.32	0.000	0.01
flo002	flo002-b2e211	flo002-b2e211p1ss_CGCGCAG_S51_L006_merged,160902_D00458_0161_AC9FERANXX	9/2/2016	13595346	283460	0.1505	66.8	84.0	5.32	0.005	0.69
flo002	flo002-b2e112	flo002-b2e112p1ss_GCAGAA_S78_L008_merged,160902_D00458_0161_AC9FERANXX	9/2/2016	19452940	409766	0.0351	71.1	26.3	27.36	0.007	1.14
flo002	flo002-b1e114	flo002-b1e114p1ss_GATGCCA_S17_L002_merged,160902_D00458_0161_AC9FERANXX	9/2/2016	16658077	12516	0.2290	49.9	99.8	0.17	0.000	0.01
flo002	flo002-b1e212	flo002-b1e212p1ss_CCAACT_S77_L008_merged,160902_D00458_0161_AC9FERANXX	9/2/2016	20725429	266403	0.0444	76.5	56.4	20.54	0.005	0.73
flo002	flo002-b2e214	flo002-b2e212p1ss_AGAATTA_S79_L008_merged,160902_D00458_0161_AC9FERANXX	9/2/2016	21488721	440312	0.1011	64.8	76.9	8.05	0.007	0.93
flo002	flo002-b1e113	flo002-b1e111_TAATCAT_S29_L004_merged,160722_ST-E00216_0084_AHNFJTCCXX	7/22/2016	49106326	806324	0.0237	80.7	47.2	0.73	0.016	1.79
flo002	flo002-b1e111	flo002-b1e111_TAATCAT_S29_L003_merged,160722_ST-E00216_0084_AHNFJTCCXX	7/22/2016	49453997	799762	0.0237	80.8	48.0	0.73	0.016	1.73
flo002	flo002-b1e112	flo002-b1e112p1_GCCTACG_S40_L004_merged,160617_ST-E00279_0088_AHTLWCCXX	6/17/2016	22512934	369711	0.0184	84.6	28.5	1.12	0.008	0.92
flo002	flo002-b1e213	flo002-b1e213p1_TAATCAT_S41_L004_merged,160617_ST-E00279_0088_AHTLWCCXX	6/17/2016	15928897	139266	0.0095	88.0	24.7	1.96	0.003	0.37
flo002	flo002-b1e214	flo002-b1e214p1_AACCTGC_S42_L004_merged,160617_ST-E00279_0088_AHTLWCCXX	6/17/2016	17280559	145299	0.0092	86.1	25.7	2.22	0.003	0.43
flo002	flo002-b2e113	flo002-b2e113p1_GACGATT_S43_L004_merged,160617_ST-E00279_0088_AHTLWCCXX	6/17/2016	16336589	258877	0.0161	69.4	27.6	1.79	0.004	0.70
flo002	flo002-b2e114	flo002-b2e114p1_TAGGCCG_S44_L004_merged,160617_ST-E00279_0088_AHTLWCCXX	6/17/2016	18878151	281402	0.0148	70.0	25.8	1.80	0.005	0.77
flo002	flo002-b2e213	flo002-b2e213p1_GGCATAG_S45_L004_merged,160617_ST-E00279_0088_AHTLWCCXX	6/17/2016	19828015	295867	0.0163	72.1	31.8	1.63	0.005	0.99
flo002	flo002-b2e214	flo002-b2e214p1_TTCAACC_S46_L004_merged,160617_ST-E00279_0088_AHTLWCCXX	6/17/2016	16587365	235807	0.0169	72.0	38.5	1.51	0.004	0.61
flo002	flo002-b1e111	flo002-b1e111_TAATCAT_S1_L001_merged,151218_ST-E00279_0055_AHJWTCXX	12/18/2015	3968029	101176	0.0245	14.9	1.76	0.002	0.24	0.24
flo003	flo003-b3e214dr	flo003-b3e214drp2_GACTTCT_S13_L003_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	96698434	14822708	0.1998	55.5	49.3	2.98	0.163	13.63
flo003	flo003-b3e213dr	flo003-b3e213drp2_GCTAATC_S12_L003_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	82363662	13348207	0.1938	57.1	42.0	3.66	0.158	13.75
flo003	flo003-b3e212dr	flo003-b3e212drp2_CGTATAT_S11_L003_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	102142313	14470025	0.1717	59.8	44.1	2.19	0.179	15.54
flo003	flo003-b3e214dr	flo003-b3e214drp2_GACTTCT_S13_L002_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	96178588	14941662	0.1996	55.5	48.3	3.04	0.165	13.74
flo003	flo003-b3e215dr	flo003-b3e215drp2_GTACTAT_S14_L002_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	115376253	16749439	0.1792	59.0	44.3	3.21	0.204	18.20
flo003	flo003-b3e212dr	flo003-b3e212drp2_CGTATAT_S11_L002_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	101589102	14608835	0.1715	59.9	42.9	2.24	0.182	15.72
flo003	flo003-b3e215dr	flo003-b3e215drp2_GTACTAT_S14_L003_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	115901845	16577856	0.1795	58.9	45.4	3.16	0.201	17.65
flo003	flo003-b3e213dr	flo003-b3e213drp2_GCTAATC_S12_L002_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	82084860	13483718	0.1934	57.2	40.9	3.73	0.160	14.05
flo003	flo003-b3e211dr	flo003-b3e211drp2_TGGCAAT_S10_L003_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	114019471	15776371	0.1731	59.2	46.4	2.13	0.191	16.45
flo003	flo003-b3e211dr	flo003-b3e211drp2_TGGCAAT_S10_L002_ARmerged,180615_ST-E00216_0253_BHLCLVCCXX,all	6/15/2018	113844295	15954541	0.1727	59.2	45.4	2.16	0.195	17.08
flo003	flo003-b3e215drp1	flo003-b3e215drp1_AAGGTCT_S21_L008_ARmerged,180309_ST-E00280_0181_AHH7WYCCXX,all	3/9/2018	68744973	50361172	0.1752	59.2	39.7	3.71	0.130	11.28
flo003	flo003-b3e214dr	flo003-b3e214drp1_CGCGCAG_S20_L008_ARmerged,180309_ST-E00280_0181_AHH7WYCCXX,all	3/9/2018	74212561	12395892	0.2063	56.1	45.3	3.23	0.141	11.95
flo003	flo003-b3e211dr	flo003-b3e211drp1_CGAATGC_S17_L008_ARmerged,180309_ST-E00280_0181_AHH7WYCCXX,all	3/9/2018	99898102	14644215	0.1744	59.0	42.5	2.42	0.180	15.02
flo003	flo003-b3e213dr	flo003-b3e213drp1_AATTCAA_S19_L008_ARmerged,180309_ST-E00280_0181_AHH7WYCCXX,all	3/9/2018	97963891	15650610	0.1986	57.1	44.5	3.75	0.183	16.05
flo003	flo003-b3e212dr	flo003-b3e212drp1_AAGGTCT_S5_L001_ARmerged,180309_ST-E00279_0198_BHH7KCCXX,all	3/9/2018	114319849	15869967	0.1699	59.8	44.5	2.37	0.197	16.59
flo003	flo003-b3e215dr	flo003-b3e215drp1_AAGGTCT_S5_L001_ARmerged,180309_ST-E00279_0198_BHH7KCCXX,all	3/9/2018	69799884	10585191	0.1745	59.5	38.5	3.71	0.133	11.38
flo003	flo003-b3e214dr	flo003-b3e214drp1_CGCGCAG_S4_L001_ARmerged,180309_ST-E00279_0198_BHH7KCCXX,all	3/9/2018	75159393	12632748	0.2060	56.2	44.7	3.24	0.144	12.18
flo003	flo003-b3e212dr	flo003-b3e212drp1_TTCGCAA_S2_L001_ARmerged,180309_ST-E00279_0198_BHH7KCCXX,all	3/9/2018	115681340	16135563	0.1692	59.9	43.9	2.36	0.201	17.24
flo003	flo003-b3e213dr	flo003-b3e213drp1_AATTCAA_S3_L001_ARmerged,180309_ST-E00279_0198_BHH7KCCXX,all	3/9/2018	98854775	15944773	0.1986	57.3	43.8	3.76	0.188	16.38
flo003	flo003-b3e211dr	flo003-b3e211drp1_CGAATGC_S1_L001_ARmerged,180309_ST-E00279_0198_BHH7KCCXX,all	3/9/2018	101246628	14908169	0.1737	59.2	41.9	2.41	0.185	15.87
flo003	flo003-b2e111p2	flo003-b2e111p2_GCAGAA_S86_L008_merged,170131_ST-E00215_0196_AHFFGWALXX	1/31/2017	28067358	5251242	0.2077	72.6	36.4	1.48	0.081	7.68
flo003	flo003-b2e111p1	flo003-b2e111p3_CGTATAT_S87_L008_merged,170131_ST-E00215_0196_AHFFGWALXX	1/31/2017	35270269	5823857	0.2053	63.6	44.3	1.19	0.090	8.94
flo003	flo003-b1e111p1	flo003-b1e111p1dr_TCGCAGG_S1_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	31542842	3863783	0.1157	54.4	25.3	7.31	0.044	3.70
flo003	flo003-b1e112p1	flo003-b1e112p1dr_CTCTGCA_S2_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	27492660	3180492	0.1156	54.5	26.3	9.89	0.036	3.34
flo003	flo003-b1e113p1	flo003-b1e113p1dr_CCTAGGT_S3_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	29900019	3629095	0.1202	54.0	26.2	9.23	0.041	3.70
flo003	flo003-b1e114p1	flo003-b1e114p1dr_GGATCAA_S4_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	33988306	4071317	0.1176	54.7	26.3	8.33	0.047	4.12
flo003	flo003-b1e115p1	flo003-b1e115p1dr_GCAAGAT_S5_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	35110218	4367983	0.1229	54.0	27.2	8.05	0.050	4.57
flo003	flo003-b1e211p1	flo003-b1e211p1dr_ATGGAGA_S6_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	25303702	3141249	0.1187	57.2	25.8	5.84	0.039	3.63
flo003	flo003-b1e212p1	flo003-b1e212p1dr_CTCGATG_S7_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	23775838	3035212	0.1248	56.8	26.1	6.98	0.037	3.51
flo003	flo003-b1e213p1	flo003-b1e213p1dr_GCTCGAA_S8_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	23804892	2912222	0.1189	57.4	26.1	6.92	0.036	3.22
flo003	flo003-b1e215p1	flo003-b1e215p1dr_CCGGTAC_S10_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	28906061	3626009	0.1252	56.0	27.2	7.54	0.043	3.98
flo003	flo003-b2e112p1	flo003-b2e112p1dr_AACTCCG_S11_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	30819241	3956374	0.1296	55.9	27.4	8.09	0.047	4.29
flo003	flo003-b2e113p1	flo003-b2e113p1dr_TTGAAGT_S12_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	15829960	1868199	0.1238	58.8	26.9	6.53	0.025	2.79
flo003	flo003-b2e114p1	flo003-b2e114p1dr_ACTATCA_S13_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	19130192	2129865	0.1158	59.7	27.3	5.62	0.029	3.09
flo003	flo003-b2e115p1	flo003-b2e115p1dr_TTGGATC_S14_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	13715146	1536797	0.1154	59.1	26.1	6.09	0.021	2.33
flo003	flo003-b3e111p1	flo003-b3e111p1dr_CGACCTG_S15_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	11955837	1351031	0.1159	59.8	26.3	5.56	0.019	1.94
flo003	flo003-b3e112p1	flo003-b3e112p1dr_TAATGCG_S16_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	21794636	4259813	0.1844	56.0	25.6	6.94	0.050	4.67
flo003	flo003-b3e113p1	flo003-b3e113p1dr_GGATCAA_S4_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	24858845	4854676	0.1833	57.0	25.2	6.53	0.059	5.96
flo003	flo003-b3e114p1	flo003-b3e114p1dr_AGGTACC_S17_L001_merged,161118_ST-E00274_0136_BHCHY5ALXX	11/18/2016	19475626	3822824	0.1836	57.1	24.3	7.01	0.046	

flo003	flo003-b2e1l2p1	flo003-b2e1l2p1dr_AACTCGG_S41_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	16818579	2095470	0.1249	58.4	22.7	7.10	0.028	3.03
flo003	flo003-b2e1l5p1	flo003-b2e1l5p1dr_TTGATC_S44_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	12683701	1484577	0.1165	59.5	23.4	5.99	0.020	2.27
flo003	flo003-b1e2l2p2	flo003-b1e2l2p2dr_GATGCCA_S18_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	22699384	3093208	0.1243	55.6	18.3	8.78	0.037	3.33
flo003	flo003-b1e1l3p2	flo003-b1e1l3p2dr_GCATTGG_S15_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	49584293	6431489	0.1214	52.9	19.5	11.00	0.073	6.29
flo003	flo003-b2e1l4p1	flo003-b2e1l4p1dr_ACTATCA_S43_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	14680171	1702460	0.1159	58.8	23.3	6.50	0.023	2.65
flo003	flo003-b2e1l4p1	flo003-b2e1l4p1dr_ACTATCA_S43_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	14690556	1733733	0.1159	58.7	21.6	6.63	0.023	2.40
flo003	flo003-b2e1l2p1dr	flo003-b2e1l2p1dr_AACTCGG_S41_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	16851555	2060679	0.1247	58.5	24.2	6.96	0.028	3.11
flo003	flo003-b1e2l4p2	flo003-b1e2l4p2dr_AGATAGG_S20_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	22556140	3021232	0.1235	55.5	18.8	9.04	0.036	3.10
flo003	flo003-b1e2l3p1	flo003-b1e2l3p1dr_GCTCGAA_S38_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	25565036	3224628	0.1192	57.1	23.3	7.31	0.040	3.87
flo003	flo003-b1e1l3p2	flo003-b1e1l3p2dr_GCATTGG_S15_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	49841787	6433807	0.1218	52.7	20.3	10.95	0.072	6.33
flo003	flo003-b1e2l4p2dr	flo003-b1e2l4p2dr_AGATAGG_S20_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	22651293	3083007	0.1242	55.4	17.7	9.20	0.037	3.46
flo003	flo003-b1e2l3p1dr	flo003-b1e2l3p1dr_GCTCGAA_S38_L006_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	25405457	3196783	0.1189	57.2	23.4	7.24	0.039	3.62
flo003	flo003-b1e2l4p2dr	flo003-b1e2l4p2dr_AGATAGG_S20_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	22700820	3077458	0.1247	55.2	18.4	9.19	0.037	3.69
flo003	flo003-b2e1l3p2	flo003-b2e1l3p2dr_CAGTACT_S23_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17777069	2172903	0.1176	58.9	19.6	6.80	0.030	3.00
flo003	flo003-b1e1l4p1dr	flo003-b1e1l4p1dr_GGATCAA_S34_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	36692128	4605966	0.1180	54.3	22.1	8.98	0.053	4.67
flo003	flo003-b1e2l5p2	flo003-b1e2l5p2dr_CCGATTG_S21_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20758887	2902652	0.1298	55.4	18.4	9.78	0.035	3.04
flo003	flo003-b1e2l3p1dr	flo003-b1e2l3p1dr_GCTCGAA_S38_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	25513672	3280051	0.1197	57.1	21.8	7.47	0.040	3.52
flo003	flo003-b1e2l5p2	flo003-b1e2l5p2dr_CCGATTG_S21_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20943473	2970558	0.1307	55.2	17.7	9.94	0.036	3.14
flo003	flo003-b2e1l3p1dr	flo003-b2e1l3p1dr_TTGAAGT_S42_L006_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20200003	2325596	0.1161	59.5	24.4	5.94	0.032	3.56
flo003	flo003-b2e1l3p2dr	flo003-b2e1l3p2dr_CAGTACT_S23_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17427822	2175570	0.1168	59.0	18.7	6.81	0.030	3.08
flo003	flo003-b1e2l4p2dr	flo003-b1e2l4p2dr_AGATAGG_S20_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	22706981	3084224	0.1244	55.4	18.1	9.17	0.037	3.40
flo003	flo003-b2e1l3p2	flo003-b2e1l3p2dr_CAGTACT_S23_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17745610	2133732	0.1162	59.1	20.1	6.64	0.029	3.05
flo003	flo003-b2e1l3p2dr	flo003-b2e1l3p2dr_CAGTACT_S23_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17797755	2175108	0.1172	59.0	19.2	6.79	0.030	3.13
flo003	flo003-b2e1l5p2dr	flo003-b2e1l5p2dr_CATCCGG_S25_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17912498	2189337	0.1162	58.9	18.6	6.90	0.030	3.06
flo003	flo003-b2e1l5p2dr	flo003-b2e1l5p2dr_CATCCGG_S25_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17931061	2190302	0.1167	58.9	19.1	6.86	0.030	3.03
flo003	flo003-b1e2l3p2dr	flo003-b1e2l3p2dr_CAAATC_S19_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	28394534	3666102	0.1190	56.3	20.0	8.37	0.045	4.08
flo003	flo003-b1e1l4p1dr	flo003-b1e1l4p1dr_GGATCAA_S34_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	36633159	4519790	0.1178	54.3	23.6	8.83	0.052	4.97
flo003	flo003-b2e1l5p2dr	flo003-b2e1l5p2dr_CATCCGG_S25_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17895796	2150365	0.1156	59.0	19.8	6.76	0.029	3.33
flo003	flo003-b2e1l5p2dr	flo003-b2e1l5p2dr_CATCCGG_S25_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	17868683	2181982	0.1171	58.8	19.4	6.87	0.030	3.36
flo003	flo003-b2e1l4p2dr	flo003-b2e1l4p2dr_AATAGTA_S24_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	21366058	2588542	0.1159	59.0	19.3	6.81	0.035	3.69
flo003	flo003-b1e2l5p2dr	flo003-b1e2l5p2dr_CCGATTG_S21_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20887388	2966488	0.1303	55.3	17.2	10.01	0.036	3.37
flo003	flo003-b1e2l5p2dr	flo003-b1e2l5p2dr_CCGATTG_S21_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20967584	2959389	0.1308	55.2	18.1	9.98	0.036	3.34
flo003	flo003-b2e1l3p1dr	flo003-b2e1l3p1dr_TTGAAGT_S42_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20269246	2390894	0.1168	59.3	22.7	6.14	0.033	3.40
flo003	flo003-b2e1l3p1dr	flo003-b2e1l3p1dr_TTGAAGT_S42_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20304529	2348700	0.1167	59.3	24.4	6.00	0.032	3.49
flo003	flo003-b2e1l4p2dr	flo003-b2e1l4p2dr_AATAGTA_S24_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	21441659	2592653	0.1161	58.9	19.7	6.78	0.035	3.72
flo003	flo003-b1e2l3p2dr	flo003-b1e2l3p2dr_CAAATC_S19_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	28700465	3751436	0.1196	56.2	19.2	8.47	0.046	4.12
flo003	flo003-b2e1l4p2dr	flo003-b2e1l4p2dr_AATAGTA_S24_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	21442956	2589988	0.1165	58.8	20.1	6.80	0.035	3.63
flo003	flo003-b1e2l3p2dr	flo003-b1e2l3p2dr_CAAATC_S19_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	28734420	3751919	0.1199	56.1	19.6	8.45	0.046	4.17
flo003	flo003-b2e1l2p2dr	flo003-b2e1l2p2dr_ATGCCCG_S22_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	24505855	3021546	0.1227	58.1	21.5	7.71	0.040	4.07
flo003	flo003-b2e1l4p2dr	flo003-b2e1l4p2dr_AATAGTA_S24_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	21287263	2532941	0.1154	59.1	20.5	6.66	0.035	3.58
flo003	flo003-b2e1l2p2dr	flo003-b2e1l2p2dr_ATGCCCG_S22_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	24609980	3083156	0.1238	58.0	20.8	7.82	0.041	4.42
flo003	flo003-b1e2l3p2dr	flo003-b1e2l3p2dr_CAAATC_S19_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	28559484	3744552	0.1194	56.2	18.7	8.47	0.046	4.15
flo003	flo003-b2e1l2p2dr	flo003-b2e1l2p2dr_ATGCCCG_S22_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	24628356	3088737	0.1236	58.0	20.4	7.81	0.041	4.27
flo003	flo003-b1e2l4p1dr	flo003-b1e2l4p1dr_ACCAACT_S39_L006_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	30729794	3966226	0.1248	55.8	24.2	7.94	0.048	4.31
flo003	flo003-b1e1l5p1dr	flo003-b1e1l5p1dr_GCAAAGT_S35_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	37808860	4939710	0.1231	53.7	22.5	8.76	0.056	5.08
flo003	flo003-b1e2l4p1dr	flo003-b1e2l4p1dr_ACCAACT_S39_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	30927926	4072312	0.1253	55.7	22.4	8.21	0.049	4.37
flo003	flo003-b2e1l2p2dr	flo003-b2e1l2p2dr_ATGCCCG_S22_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	24565656	3079871	0.1244	57.9	21.1	7.83	0.041	4.39
flo003	flo003-b1e1l5p1dr	flo003-b1e1l5p1dr_GCAAAGT_S35_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	37890128	4861399	0.1230	53.7	24.3	8.55	0.055	4.87
flo003	flo003-b3e1l1p2dr	flo003-b3e1l1p2dr_TCATGGT_S26_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	16012532	3425690	0.1864	55.6	17.2	8.02	0.041	3.88
flo003	flo003-b3e1l1p2dr	flo003-b3e1l1p2dr_TCATGGT_S26_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	15930045	3414094	0.1856	55.7	16.7	8.03	0.041	3.92
flo003	flo003-b1e1l5p1dr	flo003-b1e1l5p1dr_GCAAAGT_S35_L006_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	37519541	4806724	0.1227	53.9	24.3	8.47	0.055	5.04
flo003	flo003-b3e1l1p2dr	flo003-b3e1l1p2dr_TCATGGT_S26_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	15831946	3341923	0.1850	55.7	18.0	7.89	0.040	3.89
flo003	flo003-b3e1l1p2dr	flo003-b3e1l1p2dr_TCATGGT_S26_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	16040081	3420246	0.1865	55.5	17.6	8.04	0.041	3.79
flo003	flo003-b1e2l4p1dr	flo003-b1e2l4p1dr_ACCAACT_S39_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	31041198	4009302	0.1252	55.7	24.2	8.01	0.048	4.54
flo003	flo003-b1e2l5p1dr	flo003-b1e2l5p1dr_CCGGTAC_S40_L006_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	32866890	4340440	0.1296	55.7	24.7	8.52	0.052	4.86
flo003	flo003-b1e2l5p1dr	flo003-b1e2l5p1dr_CCGGTAC_S40_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	33126413	4383711	0.1300	55.5	24.7	8.58	0.052	4.83
flo003	flo003-b1e2l5p1dr	flo003-b1e2l5p1dr_CCGGTAC_S40_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	32912319	4443306	0.1304	55.5	23.0	8.77	0.053	4.81
flo003	flo003-b3e1l1p1dr	flo003-b3e1l1p1dr_CGACCTG_S45_L008_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	23328303	4695381	0.1845	55.6	22.6	7.37	0.055	5.12
flo003	flo003-b3e1l2p2dr	flo003-b3e1l2p2dr_AGAACCG_S27_L003_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20388102	4293800	0.1828	56.2	16.6	8.02	0.052	5.03
flo003	flo003-b3e1l1p1dr	flo003-b3e1l1p1dr_CGACCTG_S45_L006_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	23223324	4658192	0.1838	55.7	22.7	7.31	0.055	5.27
flo003	flo003-b3e1l2p2dr	flo003-b3e1l2p2dr_AGAACCG_S27_L002_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20222839	4204913	0.1816	56.4	17.3	7.90	0.051	4.90
flo003	flo003-b3e1l1p1dr	flo003-b3e1l1p1dr_CGACCTG_S45_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	23269302	4778649	0.1851	55.6	21.0	7.51	0.057	5.43
flo003	flo003-b3e1l2p2dr	flo003-b3e1l2p2dr_AGAACCG_S27_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20328160	4290739	0.1822	56.3	16.1	8.06	0.052	5.26
flo003	flo003-b3e1l2p2dr	flo003-b3e1l2p2dr_AGAACCG_S27_L005_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	20365850	4275668	0.1828	56.2	17.0	8.05	0.052	4.88
flo003	flo003-b3e1l5p1dr	flo003-b3e1l5p1dr_GAACTC_S49_L007_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	15073633	3058274	0.1773	56.8	19.8	5.97	0.037	3.39
flo003	flo003-b3e1l5p1dr	flo003-b3e1l5p1dr_GAACTC_S49_L006_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	14999290	2977825	0.1763	57.0	21.5	5.81	0.036	3.54
flo003	flo003-b1e1l5p2dr	flo003-b1e1l5p2dr_CAAATG_S17_L004_merged,161118_ST-E00215_0159_BHCFALTALXX	11/18/2016	54169388	7149572	0.1229	52.8	19.9	10.04	0.081	7.14
flo003	flo003-b3e1l5p1dr	flo003-b									

flo003	flo003-b1e211p1	flo003-b1e211p1dr_ATGGAGA_S115_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	24667967	3198449	0.1208	57.5	23.3	5.92	0.040	3.82
flo003	flo003-b1e113p2	flo003-b1e113p2dr_GCAATGG_S85_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	44026410	5679111	0.1223	53.4	21.1	10.39	0.065	5.77
flo003	flo003-b2e112p2	flo003-b2e112p2dr_ATGCCCG_S92_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	22475724	2775607	0.1233	58.8	21.9	7.36	0.038	3.72
flo003	flo003-b1e115p1	flo003-b1e115p1dr_GCAAGAT_S114_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	34569581	4452920	0.1236	54.4	24.6	8.23	0.051	4.44
flo003	flo003-b1e115p2	flo003-b1e115p2dr_CAATATG_S87_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	48252324	6327179	0.1238	53.3	21.6	9.52	0.072	6.43
flo003	flo003-b2e112p1	flo003-b2e112p1dr_AACTCCG_S120_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	15796231	1917112	0.1242	59.2	24.6	6.62	0.026	2.73
flo003	flo003-b1e214p2	flo003-b1e214p2dr_AGATAGG_S90_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	20121386	2714322	0.1250	56.0	19.4	8.70	0.033	2.91
flo003	flo003-b1e212p2	flo003-b1e212p2dr_GATGCCA_S88_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	20120384	2721246	0.1251	56.3	19.9	8.27	0.033	3.11
flo003	flo003-b1e212p1	flo003-b1e212p1dr_CTCGATG_S116_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	23282548	3068288	0.1254	57.3	23.6	7.10	0.038	3.62
flo003	flo003-b1e214p1	flo003-b1e214p1dr_ACCAACT_S118_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	28217344	3649545	0.1257	56.3	24.7	7.68	0.044	4.05
flo003	flo003-b1e215p1	flo003-b1e215p1dr_CCGGTAC_S119_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	30633735	4060419	0.1302	56.2	24.9	8.31	0.049	4.49
flo003	flo003-b1e215p2	flo003-b1e215p2dr_CCGATTG_S91_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	18646687	2619189	0.1311	55.9	19.2	9.41	0.032	2.88
flo003	flo003-b3e115p1	flo003-b3e115p1dr_GAATCTC_S128_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	13374521	2699743	0.1799	57.7	21.9	5.56	0.033	3.09
flo003	flo003-b3e112p2	flo003-b3e112p2dr_AGAACCG_S97_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	18338946	3818442	0.1832	57.1	18.1	7.55	0.047	4.49
flo003	flo003-b3e114p1	flo003-b3e114p1dr_TGCGTCC_S127_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	20428918	4025342	0.1834	56.5	22.8	8.11	0.048	4.77
flo003	flo003-b3e112p1	flo003-b3e112p1dr_TAAATGC_S125_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	24447625	4936861	0.1845	57.5	22.6	6.59	0.061	6.16
flo003	flo003-b3e114p2	flo003-b3e114p2dr_CAGGAGG_S99_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	19886858	4081376	0.1847	56.2	19.1	8.75	0.049	4.81
flo003	flo003-b3e115p2	flo003-b3e115p2dr_AATACCT_S100_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	21518686	4586643	0.1848	57.4	19.6	5.39	0.057	5.57
flo003	flo003-b3e113p1	flo003-b3e113p1dr_AGGTACC_S126_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	18935855	3832489	0.1850	57.5	21.9	7.19	0.047	4.71
flo003	flo003-b3e113p2	flo003-b3e113p2dr_TGGAATA_S98_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	24866740	5092107	0.1858	56.9	20.8	7.56	0.062	6.26
flo003	flo003-b3e111p1	flo003-b3e111p1dr_CGACCTG_S124_L007_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	21452275	4341176	0.1861	56.2	23.0	7.11	0.052	4.92
flo003	flo003-b3e111p2	flo003-b3e111p2dr_TCATGGT_S96_L005_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	14208566	3017445	0.1878	56.3	18.9	7.53	0.036	3.30
flo003	flo003-b2e111p3	flo003-b2e111p3dr_CGTATAT_S81_L005_merged,160916_ST-E00280_0092_AH32GJALXX	9/16/2016	29489373	4905754	0.2036	70.3	43.1	1.11	0.078	7.90
flo003	flo003-b2e111p2	flo003-b2e111p2dr_GCAAGAG_S76_L005_merged,160916_ST-E00280_0092_AH32GJALXX	9/16/2016	34693249	5867638	0.2091	68.2	44.1	1.28	0.089	8.82
flo003	flo003-b2e111	flo003-b2e111dr_AACCTGC_S27_L003_merged,160722_ST-E00216_0084_AHNFJTCCXX	7/22/2016	90755275	10101561	0.1724	68.8	58.8	0.74	0.145	13.50
flo003	flo003-b2e111	flo003-b2e111dr_AACCTGC_S27_L004_merged,160722_ST-E00216_0084_AHNFJTCCXX	7/22/2016	90514455	10142835	0.1723	68.7	58.4	0.76	0.146	13.70
flo003	flo003-b3e211p1	flo003-b3e211p1dr_CGAATGC_S19_L004_merged,160701_ST-E00279_0090_AHNFYLCXX	7/11/2016	25031350	4592521	0.1674	58.6	21.5	2.21	0.062	5.17
flo003	flo003-b3e212p1	flo003-b3e212p1dr_TCGCAA_S20_L004_merged,160701_ST-E00279_0090_AHNFYLCXX	7/11/2016	29362596	5127099	0.1629	59.2	23.5	2.21	0.069	5.84
flo003	flo003-b3e213p1	flo003-b3e213p1dr_AATGCAA_S21_L004_merged,160701_ST-E00279_0090_AHNFYLCXX	7/11/2016	28680289	5790239	0.1917	56.5	24.4	3.50	0.074	6.42
flo003	flo003-b3e214p1	flo003-b3e214p1dr_CGCGCAG_S22_L004_merged,160701_ST-E00279_0090_AHNFYLCXX	7/11/2016	22238249	4658748	0.1982	55.9	25.3	3.00	0.058	4.78
flo003	flo003-b3e215p1	flo003-b3e215p1dr_AAGGTCT_S23_L004_merged,160701_ST-E00279_0090_AHNFYLCXX	7/11/2016	14979022	2747223	0.1690	58.9	21.1	3.28	0.037	2.93
flo003	flo003-b1e111p1	flo003-b1e111p1dr_TCGCAGG_S110_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	31548816	3848446	0.1096	55.2	23.5	5.44	0.045	3.73
flo003	flo003-b1e111p2	flo003-b1e111p2dr_CATGCTC_S83_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	42577869	5334242	0.1089	54.5	19.5	6.23	0.062	5.60
flo003	flo003-b1e112p1	flo003-b1e112p1dr_CTCTGCA_S111_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	27436245	3170860	0.1088	55.2	24.5	7.43	0.037	3.31
flo003	flo003-b1e112p2	flo003-b1e112p2dr_ACGCAAC_S84_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	20877761	2460342	0.1077	54.5	20.8	8.62	0.028	2.42
flo003	flo003-b1e113p1	flo003-b1e113p1dr_CTAGGT_S112_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	29070896	3555892	0.1133	54.7	23.7	7.03	0.041	3.80
flo003	flo003-b1e113p2	flo003-b1e113p2dr_GCAATGG_S85_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	43981101	5641014	0.1156	54.0	20.3	7.81	0.065	5.82
flo003	flo003-b1e114p1	flo003-b1e114p1dr_GGATCAA_S113_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	32572936	3978559	0.1131	55.6	24.2	6.21	0.047	4.32
flo003	flo003-b1e114p2	flo003-b1e114p2dr_GATCTCG_S86_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	23842678	3052550	0.1116	55.2	17.8	7.18	0.036	2.95
flo003	flo003-b1e115p1	flo003-b1e115p1dr_GCAAGAT_S114_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	34873148	4935471	0.1175	54.8	25.1	6.03	0.051	4.49
flo003	flo003-b1e115p2	flo003-b1e115p2dr_CAATATG_S87_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	48468026	6292753	0.1168	53.8	20.7	7.14	0.072	6.61
flo003	flo003-b1e211p1	flo003-b1e211p1dr_ATGGAGA_S115_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	24264938	3070412	0.1155	58.2	23.8	4.27	0.039	3.47
flo003	flo003-b1e212p1	flo003-b1e212p1dr_CTCGATG_S116_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	22896403	2953697	0.1196	57.8	23.9	5.23	0.037	3.32
flo003	flo003-b1e212p2	flo003-b1e212p2dr_GATGCCA_S88_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	20542527	2733058	0.1185	57.0	19.4	6.22	0.034	3.08
flo003	flo003-b1e213p1	flo003-b1e213p1dr_GCTCGAA_S117_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	23305026	2865207	0.1139	58.4	24.3	5.13	0.036	3.38
flo003	flo003-b1e213p2	flo003-b1e213p2dr_CAATTAC_S89_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	26178668	3351716	0.1141	57.5	20.0	6.01	0.042	3.84
flo003	flo003-b1e214p1	flo003-b1e214p1dr_ACCAACT_S118_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	28057898	3542077	0.1193	56.9	25.1	5.66	0.043	4.03
flo003	flo003-b1e214p2	flo003-b1e214p2dr_AGATAGG_S90_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	20231696	2696644	0.1183	56.7	18.6	6.53	0.033	3.19
flo003	flo003-b1e215p1	flo003-b1e215p1dr_CCGGTAC_S119_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	31419434	4048019	0.1239	56.6	26.0	6.09	0.049	4.82
flo003	flo003-b1e215p2	flo003-b1e215p2dr_CCGATTG_S91_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	18663517	2599868	0.1241	56.5	18.2	7.11	0.032	3.09
flo003	flo003-b2e112p1	flo003-b2e112p1dr_AACTCCG_S120_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	15612600	1874828	0.1202	59.7	25.3	4.83	0.026	2.72
flo003	flo003-b2e112p2	flo003-b2e112p2dr_ATGCCCG_S92_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	23364858	2834070	0.1172	59.4	21.7	5.51	0.039	4.20
flo003	flo003-b2e113p1	flo003-b2e113p1dr_TGGAAGT_S121_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	18686476	2123834	0.1132	60.7	25.6	4.17	0.030	3.06
flo003	flo003-b2e113p2	flo003-b2e113p2dr_CAGTACT_S93_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	16520276	1958741	0.1115	60.4	20.2	4.73	0.027	3.03
flo003	flo003-b2e114p1	flo003-b2e114p1dr_ACTATCA_S122_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	13310800	1517360	0.1120	60.1	24.4	4.50	0.021	2.28
flo003	flo003-b2e114p2	flo003-b2e114p2dr_AATAGTA_S94_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	19408497	2278071	0.1111	60.5	20.7	4.71	0.032	3.26
flo003	flo003-b2e115p1	flo003-b2e115p1dr_TGGATC_S123_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	11253876	1307405	0.1136	60.7	24.2	4.07	0.018	1.89
flo003	flo003-b2e115p2	flo003-b2e115p2dr_CATCCGG_S95_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	16584572	1951054	0.1098	60.3	19.7	4.81	0.027	3.02
flo003	flo003-b3e111p1	flo003-b3e111p1dr_CGACCTG_S124_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	21457871	4245870	0.1772	56.8	23.4	5.16	0.051	4.90
flo003	flo003-b3e111p2	flo003-b3e111p2dr_TCATGGT_S96_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	14045657	2959115	0.1782	57.0	17.7	5.58	0.036	3.47
flo003	flo003-b3e112p1	flo003-b3e112p1dr_TAAATGC_S125_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	24183921	4754770	0.1755	58.0	23.1	4.79	0.059	5.82
flo003	flo003-b3e112p2	flo003-b3e112p2dr_AGAACCG_S97_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	18496491	3813274	0.1742	57.7	17.1	5.63	0.047	4.58
flo003	flo003-b3e113p1	flo003-b3e113p1dr_AGGTACC_S126_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	18494576	3659253	0.1759	57.9	22.0	5.30	0.045	4.37
flo003	flo003-b3e113p2	flo003-b3e113p2dr_TGGAATA_S98_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	25678505	5191481	0.1773	57.5	20.4	5.64	0.064	6.27
flo003	flo003-b3e114p1	flo003-b3e114p1dr_TGCGTCC_S127_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	20303495	3920569	0.1746	57.0	23.2	5.96	0.047	4.85
flo003	flo003-b3e114p2	flo003-b3e114p2dr_CAGGAGG_S99_L005_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	20304260	4119271	0.1749	56.8	18.3	6.52	0.050	4.81
flo003	flo003-b3e115p1	flo003-b3e115p1dr_GAATCTC_S128_L007_merged,160610_ST-E00279_0087_BHN7KCCXX	6/10/2016	12422186	2500633	0.1746	58.5	21.4	3.99	0.031	2.84
flo003	flo003-b3e115p2	flo003-b3e115p2dr_AATACCT_S100_L005_merged,160610_ST-E00279_0									

flo006	flo006-b1e3l2dr	flo006-b1e3l2drp2_TCATTGGT_S9_L006_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	115694634	9086948	0.1243	57.2	52.4	2.39	0.118	8.01
flo006	flo006-b1e2l5dr	flo006-b1e2l5drp2_CATCCGG_S8_L004_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	113130557	7864215	0.1201	56.5	57.1	2.32	0.099	7.47
flo006	flo006-b1e3l3dr	flo006-b1e3l3drp1_CAATTAC_S2_L002_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	113530984	8611051	0.1197	56.7	52.3	2.54	0.111	7.69
flo006	flo006-b1e2l4dr	flo006-b1e2l4drp1_CAATATG_S33_L007_ARmerged,180713_ST-E00215_0278_AHLKLCCKXY,all	7/13/2018	117104391	8480560	0.1225	55.7	55.6	2.91	0.106	8.20
flo006	flo006-b1e3l3dr	flo006-b1e3l3drp2_AGAACCG_S10_L005_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	108098563	8280264	0.1208	56.6	52.2	2.58	0.107	7.43
flo006	flo006-b1e2l3dr	flo006-b1e2l3drp2_CAGTACT_S6_L003_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	125033615	9214511	0.1197	56.3	53.5	2.82	0.117	9.20
flo006	flo006-b1e3l3dr	flo006-b1e3l3drp1_CAATTAC_S2_L001_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	113489941	8525866	0.1196	56.8	52.8	2.50	0.110	7.63
flo006	flo006-b1e3l4dr	flo006-b1e3l4drp1_AGATAGG_S3_L001_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	120531582	8931638	0.1171	57.0	52.8	2.14	0.115	8.06
flo006	flo006-b1e2l4dr	flo006-b1e2l4drp2_AATAGTA_S7_L004_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	122057772	8596549	0.1236	55.9	57.4	2.83	0.107	7.82
flo006	flo006-b1e3l2dr	flo006-b1e3l2drp1_GATGCCA_S1_L001_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	131881744	9864206	0.1228	57.1	54.5	2.31	0.127	8.81
flo006	flo006-b1e2l3dr	flo006-b1e2l3drp2_CAGTACT_S6_L004_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	126164275	9132711	0.1199	56.4	54.6	2.71	0.116	9.32
flo006	flo006-b1e3l5dr	flo006-b1e3l5drp1_CCGATTG_S4_L001_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	118177772	8998616	0.1215	57.0	53.4	2.07	0.116	8.17
flo006	flo006-b1e2l4dr	flo006-b1e2l4drp1_CAATATG_S33_L008_ARmerged,180713_ST-E00215_0278_AHLKLCCKXY,all	7/13/2018	117388083	8380238	0.1227	55.7	56.5	2.86	0.104	7.70
flo006	flo006-b1e2l4dr	flo006-b1e2l4drp2_AATAGTA_S7_L003_ARmerged,180713_ST-E00215_0279_BHLCMTCCXY,all	7/13/2018	121110934	8688231	0.1234	55.8	56.4	2.94	0.108	8.27
flo006	flo006-b1e1l2dr	flo006-b1e1l2drp1_CGACCTG_S6_L003_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	111871310	11967690	0.1449	54.7	39.9	5.60	0.154	11.98
flo006	flo006-b1e1l2dr	flo006-b1e1l2drp2_GCCTACG_S10_L004_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	116119022	12545880	0.1447	54.5	39.0	5.82	0.161	12.14
flo006	flo006-b1e1l2dr	flo006-b1e1l2drp1_CGACCTG_S6_L002_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	110203824	12141265	0.1472	54.5	38.9	5.75	0.156	11.95
flo006	flo006-b1e1l4dr	flo006-b1e1l4drp1_AGGTACC_S8_L002_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	118011616	12585217	0.1456	54.9	40.2	5.82	0.162	12.17
flo006	flo006-b1e1l4dr	flo006-b1e1l4drp2_AACCTGC_S12_L004_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	120529734	12555385	0.1424	55.1	40.3	5.75	0.162	12.13
flo006	flo006-b1e1l3dr	flo006-b1e1l3drp2_TAATCAT_S11_L004_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	122749242	12788546	0.1442	55.2	42.0	4.87	0.165	12.15
flo006	flo006-b1e1l4dr	flo006-b1e1l4drp1_AGGTACC_S8_L003_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	118970895	12373777	0.1437	55.0	41.1	5.66	0.160	11.97
flo006	flo006-b1e1l5dr	flo006-b1e1l5drp1_TGCGTCC_S9_L002_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	118426114	12908123	0.1501	54.9	40.5	5.90	0.167	12.67
flo006	flo006-b1e1l5dr	flo006-b1e1l5drp2_TGCGTCC_S9_L003_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	120485520	12741586	0.1476	55.1	41.5	5.74	0.165	12.67
flo006	flo006-b1e1l3dr	flo006-b1e1l3drp1_TAATGCG_S7_L002_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	121739180	13040952	0.1468	55.1	41.3	4.90	0.169	12.50
flo006	flo006-b1e1l5dr	flo006-b1e1l5drp2_GACGATT_S13_L004_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	134933567	13584142	0.1462	55.0	44.1	5.57	0.174	12.94
flo006	flo006-b1e1l3dr	flo006-b1e1l3drp1_TAATGCG_S7_L003_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	122656435	12832358	0.1447	55.2	42.1	4.79	0.166	12.32
flo006	flo006-b2e3l1p1	flo006-b2e3l1p1_ACGCAAC_S28_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	18421349	658785	0.0495	55.3	37.5	11.05	0.008	1.85
flo006		flo006-b2e1l2drp1_CCGATTG_S25_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	30397783	3301214	0.1423	53.3	30.3	12.35	0.042	3.43
flo006	flo006-b1e3l1dr	flo006-b1e3l1drp1_ATGCCCG_S26_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	40606772	4614991	0.1452	53.6	29.8	11.27	0.059	4.12
flo006	flo006-b2e2l1p1	flo006-b2e2l1p1_CATGCTC_S27_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	41600523	980532	0.0605	55.5	71.2	5.11	0.011	2.19
flo006	flo006-b1e1l3p2	flo006-b1e1l3p2_TAATCAT_S28_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	19714423	2637411	0.1474	51.7	24.0	6.61	0.035	2.56
flo006	flo006-b1e1l4p2	flo006-b1e1l4p2_AACCTGC_S29_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	18864436	2499339	0.1458	56.6	22.7	7.72	0.033	2.46
flo006	flo006-b2e1l5p1	flo006-b2e1l5p1_GCATTTGG_S26_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	14828879	503204	0.0413	51.1	24.1	14.39	0.006	1.12
flo006	flo006-b2e1l3p2	flo006-b2e1l3p2_GGCATAG_S32_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	17071269	597223	0.0412	51.7	25.3	11.09	0.007	1.36
flo006	flo006-b1e1l2p2	flo006-b1e1l2p2_GCCTACG_S27_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	18273180	2474012	0.1486	53.1	22.7	7.69	0.033	2.62
flo006	flo006-b2e1l2p1	flo006-b2e1l2p1_GAATCTC_S23_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	18694328	637990	0.0403	51.6	25.0	11.69	0.008	1.39
flo006	flo006-b1e1l2p1	flo006-b1e1l2p1_CGACCTG_S57_L008_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	23367016	3202247	0.1402	55.2	16.1	8.34	0.043	3.39
flo006	flo006-b2e1l4p2	flo006-b2e1l4p2_TTCAACC_S33_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	18629561	627101	0.0410	51.5	25.4	13.08	0.008	1.49
flo006	flo006-b2e1l4p1	flo006-b2e1l4p1_ACGCAAC_S25_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	19496358	650450	0.0413	51.4	26.6	12.97	0.008	1.74
flo006	flo006-b2e1l5p2	flo006-b2e1l5p2_TTAACCTC_S34_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	18363232	608051	0.0409	51.1	25.3	14.35	0.007	1.44
flo006	flo006-b1e1l5p2	flo006-b1e1l5p2_GACGATT_S30_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	22391273	2963901	0.1502	55.4	25.0	7.73	0.039	2.97
flo006	flo006-b2e1l2p2	flo006-b2e1l2p2_TAGGCCG_S31_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	21434642	707349	0.0397	51.8	26.6	11.35	0.009	1.59
flo006	flo006-b1e1l4p1	flo006-b1e1l4p1_AGGTACC_S59_L008_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	22448213	3049885	0.1392	53.8	16.0	8.54	0.041	3.16
flo006	flo006-b1e1l5p1	flo006-b1e1l5p1_TAATGCG_S58_L008_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	23417649	3243983	0.1432	54.7	16.5	8.67	0.044	3.24
flo006	flo006-b1e1l3p1	flo006-b1e1l3p1_TAATGCG_S58_L008_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	25094791	3463702	0.1403	53.8	16.6	7.29	0.047	3.53
flo006	flo006-b2e1l3p1	flo006-b2e1l3p1_CATGCTC_S24_L007_merged,170224_ST-E00279_0154_AHF2WHALXX	2/24/2017	32294226	1062550	0.0408	51.8	29.4	10.68	0.013	2.44
flo006	flo006-b2e1l1p1	flo006-b2e1l1p1_ACGTATG_S85_L008_merged,170131_ST-E00215_0196_AHFFGWALXX	1/31/2017	7115574	376451	0.0541	59.4	24.6	2.29	0.005	0.93
flo006		flo006-b1e1l1p1_CTGGCAG_S84_L008_merged,170131_ST-E00215_0196_AHFFGWALXX	1/31/2017	29402178	5018944	0.2012	58.9	34.1	2.52	0.073	5.37
flo007	flo007-b2e1l2p1	flo007-b2e1l2p1_AACTCCG_S1_L001_ARmerged,171208_ST-E00279_0192_BHHJWCCXY,all	12/8/2017	24894224	7636	0.0026	63.7	15.3	76.41	0.000	0.08
flo007	flo007-b1e1l4p1	flo007-b1e1l4p1_ACCAACT_S17_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	26382693	15559	0.0017	56.5	15.2	58.71	0.000	0.05
flo007	flo007-b2e2l1p1	flo007-b2e2l1p1_TTGAAGT_S19_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	46417856	22188	0.0013	55.0	27.6	46.15	0.000	0.08
flo007	flo007-b3e1l1p1	flo007-b3e1l1p1_ACTATCA_S20_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	25248004	16385	0.0025	57.0	15.6	64.84	0.000	0.05
flo007	flo007-b1e1l5p1	flo007-b1e1l5p1_CCGGTAC_S18_L002_ARmerged,171107_ST-E00215_0242_AHCYJLCCXY	11/7/2017	41174010	21298	0.0014	56.6	15.4	56.23	0.000	0.07
flo008		flo008-b2e1l1_GGCATAG_S5_L001_merged,151218_ST-E00279_0055_AHJWJWCCXX	12/18/2015	28848703	11619	0.0012		8.7	65.33	0.000	0.03
flo009	flo009-b3e1l1p1	flo009-b3e1l1p1_ACCAACG_S48_L006_ARmerged,180509_ST-E00274_0227_BHLCWFCCXY,all	5/9/2018	73061596	49323	0.0015	80.8	40.5	26.73	0.001	8.53
flo009	flo009-b3e1l1	flo009-b3e1l1p1_ACCAACG_S43_L003_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	33132417	28208	0.0013	79.2	19.6	31.09	0.001	4.65
flo009	flo009-b2e2l1p1	flo009-b2e2l1p1_AATCTTC_S42_L003_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	36286707	5997	0.0008	59.2	21.9	64.82	0.000	2.20
flo010	flo010-b1e2l1p1	flo010-b1e2l1p1_AGATGGC_S44_L003_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	9199023	6162	0.0012	60.9	10.7	49.48	0.000	0.00
flo010	flo010-b3e2l1p1	flo010-b3e2l1p1_CCGTTAG_S46_L003_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	35393257	349093	0.0094	56.5	14.6	10.41	0.005	0.23
flo010	flo010-b2e3l1p1	flo010-b2e3l1p1_CGAGTTT_S45_L003_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	57460281	523054	0.0085	62.6	17.6	4.60	0.008	0.34
flo010	flo010-b3e3l1p1	flo010-b3e3l1p1_CGCTCTC_S47_L003_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	41611783	382201	0.0086	59.1	15.2	7.37	0.005	0.23
flo010	flo010-b3e1l4p1	flo010-b3e1l4p1_CTCTGCA_S83_L007_merged,170131_ST-E00215_0196_AHFFGWALXX	1/31/2017	81428492	823440	0.0103	62.5	20.9	6.06	0.012	0.65
flo010	flo010-b1e1l4ac	flo010-b1e1l4acp1_TAGTCTA_S33_L006_merged,170127_ST-E00216_0170_BHFFGLALXX	1/27/2017	22925826	389765	0.0157	75.8	64.2	0.84	0.004	5.37
flo010	flo010-b1e1l4ac	flo010-b1e1l4acp1_TAGTCTA_S19_L005_merged,170127_ST-E00216_0170_BHFFGLALXX	1/27/2017	45772013	252595	0.0035	83.5	15.8	11.43	0.003	4.38
flo010	flo010-b2e1l2ac	flo010-b2e1l2acp1_TGCATGA_S20_L005_merged,170127_ST-E00216_0170_BHFFGLALXX	1/27/2017	33166202	1186755	0.0292	63.8	63.3	1.38	0.008	4.16
flo010	flo010-b2e1l2ac	flo010-b2e1l2acp1_TGCATGA_S34_L006_merged,170127_ST-E00216_0170_BHFFGLALXX	1/27/2017	26750833	2918628	0.1169	60.1	84.5	0.17	0.011	7.14
flo010	flo010-b2e1l2p2	flo010-b2e1l2p2_TAGTCC_S87_L005_merged,161118_ST-E00215_0158_AHCK3MALXX	11/18/2016	74180435	826969	0.0129	58.6	33.6	6.29	0.011	0.64
flo010	flo010-b2e1l2p3	flo010-b2e1l2p3_GTACTAT_S90_L005_merged,161118_ST-E00215_0158_AHCK3MALXX	11/18/2016	59							

flo011	flo011-b1e115p1	flo011-b1e115p1dr_GGTCAAG_S4_L002_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	127798857	13027999	0.1210	61.2	29.1	6.54	0.194	9.63
flo011	flo011-b1e115p1	flo011-b1e115p1dr_GGTCAAG_S4_L001_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	125923818	12794389	0.1203	61.2	28.9	6.54	0.191	9.38
flo011	flo011-b1e113p1	flo011-b1e113p1dr_AGCAGGT_S2_L002_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	127669182	11935041	0.1098	61.7	29.0	6.11	0.179	8.61
flo011	flo011-b1e115p1	flo011-b1e115p1dr_GGTCAAG_S4_L003_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	127672979	12693521	0.1203	61.2	30.7	6.36	0.189	9.33
flo011	flo011-b1e113p1	flo011-b1e113p1dr_AGCAGGT_S2_L001_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	125875224	11712237	0.1090	61.7	28.8	6.10	0.176	8.84
flo011	flo011-b1e114p2	flo011-b1e114p2dr_TCAGCTT_S7_L004_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	127768342	11655319	0.1201	61.6	36.4	6.45	0.172	8.50
flo011	flo011-b1e113p1	flo011-b1e113p1dr_AGCAGGT_S2_L003_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	127673618	11618198	0.1091	61.7	30.7	5.94	0.174	8.31
flo011	flo011-b1e114p2	flo011-b1e114p2dr_TCAGCTT_S7_L006_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	133740159	11506231	0.1200	61.6	40.5	6.05	0.169	8.60
flo011	flo011-b1e112p2	flo011-b1e112p2dr_AGAAGAC_S5_L004_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	145880912	13579827	0.1150	60.8	33.5	5.31	0.199	10.15
flo011	flo011-b1e114p2	flo011-b1e114p2dr_TCAGCTT_S7_L005_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	131733806	11564175	0.1217	61.5	40.0	6.15	0.169	8.01
flo011	flo011-b1e113p1	flo011-b1e113p1dr_AGCAGGT_S2_L006_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	151425059	13372435	0.1147	60.8	37.3	5.02	0.194	9.43
flo011	flo011-b1e114p1	flo011-b1e114p1dr_GTACCGG_S3_L001_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	149411207	14300736	0.1187	61.3	31.8	7.04	0.212	10.32
flo011	flo011-b1e114p1	flo011-b1e114p1dr_GTACCGG_S3_L002_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	152005918	14585966	0.1196	61.2	32.1	7.02	0.216	10.07
flo011	flo011-b1e112p2	flo011-b1e112p2dr_AGAAGAC_S5_L005_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	149546126	13452149	0.1163	60.6	36.9	5.08	0.195	9.45
flo011	flo011-b1e114p1	flo011-b1e114p1dr_GTACCGG_S3_L003_ARmerged-N,190125_ST-E00215_0330_BHWM2HCCXY,all	1/25/2019	152020623	14242331	0.1189	61.3	33.6	6.85	0.210	10.30
flo011	flo011-b2e114p1	flo011-b2e114p1dr_CTCGCGC_S4_L005_ARmerged,180509_ST-E00274_0227_BHLWFCCXY,all	5/9/2018	72171290	18727334	0.3048	59.4	34.8	2.40	0.261	12.43
flo011	flo011-b2e112p1	flo011-b2e112p1dr_CGCGGTA_S38_L005_ARmerged,180509_ST-E00274_0227_BHLWFCCXY,all	5/9/2018	91967152	20942308	0.2851	59.3	38.3	3.39	0.289	13.74
flo011	flo011-b2e113p1	flo011-b2e113p1dr_GCAGTCC_S39_L005_ARmerged,180509_ST-E00274_0227_BHLWFCCXY,all	5/9/2018	88048053	20975704	0.2884	60.0	36.9	2.32	0.295	14.18
flo011	flo011-b2e111p1	flo011-b2e111p1dr_AACCAGG_S37_L005_ARmerged,180509_ST-E00274_0227_BHLWFCCXY,all	5/9/2018	111853283	25734649	0.2898	58.8	38.6	3.56	0.351	16.20
flo011	flo011-b2e115p1	flo011-b2e115p1dr_CTGCGAC_S41_L005_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	5/9/2018	132724619	31289873	0.2928	59.8	38.2	2.80	0.438	20.61
flo011	flo011-b1e215dr	flo011-b1e215drp2_TAGGCGG_S18_L005_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	82944757	10400827	0.1413	62.9	28.6	2.97	0.161	5.89
flo011	flo011-b1e213dr	flo011-b1e213drp2_AACCTGC_S16_L005_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	97095888	11136407	0.1306	63.6	30.3	2.25	0.174	6.87
flo011	flo011-b1e214dr	flo011-b1e214drp2_GCCTAGC_S14_L005_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	107202032	11474011	0.1252	63.1	31.4	3.23	0.176	7.49
flo011	flo011-b1e214dr	flo011-b1e214drp2_GACGATT_S17_L005_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	105714912	12999092	0.1402	62.6	29.9	2.68	0.199	7.48
flo011	flo011-b1e212dr	flo011-b1e212drp2_TAATCAT_S15_L005_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	107586045	12624176	0.1379	62.9	32.8	2.20	0.193	7.34
flo011	flo011-b2e111dr	flo011-b2e111drp2_GGCATAG_S19_L006_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	83368054	20657997	0.2827	59.4	31.2	3.73	0.290	13.29
flo011	flo011-b2e112dr	flo011-b2e112drp2_TTCAACC_S20_L007_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	81739761	20121530	0.2780	60.0	30.4	3.54	0.287	13.57
flo011	flo011-b2e111dr	flo011-b2e111drp2_GGCATAG_S19_L007_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	82561869	20496483	0.2825	59.5	31.0	3.70	0.289	13.42
flo011	flo011-b2e112dr	flo011-b2e112drp2_TTCAACC_S20_L006_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	82688539	20278716	0.2785	59.9	30.9	3.55	0.288	13.53
flo011	flo011-b2e114dr	flo011-b2e114drp2_TAGTCTA_S22_L006_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	116500383	30721108	0.3000	59.5	32.3	2.42	0.433	20.24
flo011	flo011-b2e113dr	flo011-b2e113drp2_TTAACCT_S21_L007_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	102417821	25627908	0.2808	60.2	30.9	2.56	0.367	16.92
flo011	flo011-b2e115dr	flo011-b2e115drp2_TGCATGA_S23_L007_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	113665455	28975630	0.2882	59.9	31.0	3.04	0.412	19.31
flo011	flo011-b2e115dr	flo011-b2e115drp2_TGCATGA_S23_L006_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	114767916	29222783	0.2888	59.8	31.3	3.05	0.415	18.79
flo011	flo011-b2e113dr	flo011-b2e113drp2_TTAACCT_S21_L006_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	103370158	25832416	0.2816	60.1	31.3	2.57	0.369	17.66
flo011	flo011-b2e114dr	flo011-b2e114drp2_TAGTCTA_S22_L007_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	115127199	30411228	0.2994	59.6	32.0	2.42	0.429	19.57
flo011	flo011-b1e112p2	flo011-b1e112p2dr_AGAAGAC_S4_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	19944139	3056153	0.1301	54.1	4.9	3.05	0.046	2.20
flo011	flo011-b1e113p2	flo011-b1e113p2dr_GTCCGGC_S2_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	17910253	2673354	0.1264	62.0	4.7	3.13	0.040	2.08
flo011	flo011-b1e114p2	flo011-b1e114p2dr_TCAGCTT_S3_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	22417798	3444130	0.1339	56.2	6.6	3.89	0.052	2.51
flo011	flo011-b1e211p2	flo011-b1e211p2dr_GCCTAGC_S5_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	21756903	3206726	0.1286	54.4	6.3	4.02	0.049	1.92
flo011	flo011-b1e115p2	flo011-b1e115p2dr_AGACGGC_S4_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	23689511	3730679	0.1349	63.4	5.5	3.37	0.056	2.63
flo011	flo011-b1e213p2	flo011-b1e213p2dr_AACCTGC_S7_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	18900308	2961603	0.1343	55.0	5.6	2.71	0.045	1.49
flo011	flo011-b1e215p2	flo011-b1e215p2dr_TAGGCGG_S9_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	19989137	3323815	0.1438	62.3	5.6	3.56	0.050	2.00
flo011	flo011-b1e212p2	flo011-b1e212p2dr_TAATCAT_S6_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	22964671	3748214	0.1409	68.6	6.4	2.70	0.057	1.93
flo011	flo011-b1e214p2	flo011-b1e214p2dr_GACGATT_S8_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	20463807	3406665	0.1429	55.0	5.3	3.22	0.052	1.73
flo011	flo011-b2e111p2	flo011-b2e111p2dr_GGCATAG_S10_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	19118301	6160530	0.2749	55.9	6.0	4.51	0.086	3.84
flo011	flo011-b2e112p2	flo011-b2e112p2dr_TTCAACC_S11_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	18767078	6079396	0.2758	66.3	5.9	4.25	0.086	3.86
flo011	flo011-b2e114p2	flo011-b2e114p2dr_TAGTCTA_S13_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	26133714	8979685	0.2879	49.7	5.7	2.87	0.127	5.31
flo011	flo011-b2e113p2	flo011-b2e113p2dr_TTAACCT_S12_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	22805987	7574374	0.2787	55.6	5.6	3.04	0.108	4.93
flo011	flo011-b2e115p2	flo011-b2e115p2dr_TGCATGA_S14_L001_merged,170822_ST-E00274_0186_BH3JT3CCXY	8/22/2017	29222340	9796998	0.2844	52.3	6.1	3.58	0.138	6.16
flo011	flo011-b3e211p2	flo011-b3e211p2dr_ACGTATG_S86_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	17601678	3080438	0.1611	70.6	13.7	2.88	0.048	2.47
flo011	flo011-b2e211p2	flo011-b2e211p2dr_AATGATG_S76_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	16418285	4001511	0.2251	58.7	13.2	3.09	0.061	3.16
flo011	flo011-b3e213p2	flo011-b3e213p2dr_TACTTAG_S88_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	18381528	3062791	0.1553	61.7	14.0	2.86	0.049	2.69
flo011	flo011-b3e212p2	flo011-b3e212p2dr_ATACTGA_S87_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	17717382	3007979	0.1594	68.4	14.2	3.92	0.047	2.53
flo011	flo011-b3e215p2	flo011-b3e215p2dr_GACGGCG_S90_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	19087899	3123113	0.1535	58.5	14.3	3.45	0.050	2.85
flo011	flo011-b2e213p2	flo011-b2e213p2dr_AACTAGA_S78_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	19007705	4708698	0.2333	63.0	13.8	4.34	0.071	3.74
flo011	flo011-b2e215p2	flo011-b2e215p2dr_CGACGGT_S80_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	18731724	4509335	0.2277	58.4	14.4	4.18	0.068	3.59
flo011	flo011-b3e112p2	flo011-b3e112p2dr_CGCGGTA_S82_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	20437864	3138198	0.1425	60.0	13.7	3.78	0.049	2.52
flo011	flo011-b3e214p2	flo011-b3e214p2dr_AAGCTAA_S89_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	20051991	3309770	0.1579	61.4	15.9	3.88	0.052	2.94
flo011	flo011-b2e214p2	flo011-b2e214p2dr_CTATGCG_S79_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	19367473	4775086	0.2314	62.0	13.6	4.29	0.072	3.66
flo011	flo011-b2e212p2	flo011-b2e212p2dr_AGTGAGA_S77_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	19867397	4805416	0.2279	62.6	14.0	4.08	0.073	3.81
flo011	flo011-b3e114p2	flo011-b3e114p2dr_CTCGCGC_S84_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	23887412	3541643	0.1389	61.6	13.8	4.54	0.055	2.97
flo011	flo011-b3e111p2	flo011-b3e111p2dr_AACCAGG_S81_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	22157597	3518728	0.1481	64.3	13.4	4.83	0.053	2.97
flo011	flo011-b3e115p2	flo011-b3e115p2dr_CTCGCGC_S85_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	22854799	3308519	0.1370	67.0	14.1	4.97	0.051	2.64
flo011	flo011-b3e113p2	flo011-b3e113p2dr_GCAGTCC_S83_L007_merged,170720_ST-E00216_0202_BHHYJALXX	7/20/2017	26735563	4002190	0.1393	65.9	13.8	4.10	0.062	4.16
flo011	flo011-b1e111p3	flo011-b1e111p3dr_CGACGCC_S88_L008_merged,170131_ST-E00215_0196_AHFFGWALXX	1/31/2017	66299360	11470094	0.1888	65.8	27.7	1.12	0.201	9.62
flo011	flo011-b1e111p2	flo011-b1e111p2dr_CCGGATA_S82_L007_merged,170131_ST-E00215_0196_AHFFGWALXX	1/31/2017	110340250	19339087	0.1961	76.7	29.5	1.04	0.341	17.01
flo011	flo011-b2e211p1	flo011-b2e211p1dr_AATAAGC_S1_L001_merged,170110_ST-E00280_0129_BH7CWJALXX	1/10/2017	30124975	8135514	0.2499	58.4				

fio011	fio011-b2e2l4p1	fio011-b2e2l4p1dr_GCAGAAAG_S21_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	27427845	6631290	0.2398	58.3	18.8	4.36	0.096	4.83
fio011	fio011-b2e2l4p1	fio011-b2e2l4p1dr_GCAGAAAG_S21_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	28005251	6802406	0.2380	58.0	17.7	4.52	0.098	4.69
fio011	fio011-b2e2l4p1	fio011-b2e2l4p1dr_GCAGAAAG_S21_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	28487223	6907375	0.2389	57.9	18.2	4.50	0.100	5.05
fio011	fio011-b2e2l4p1	fio011-b2e2l4p1dr_GCAGAAAG_S21_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	27690240	6588206	0.2385	58.2	19.8	4.32	0.095	4.90
fio011	fio011-b2e2l3p1	fio011-b2e2l3p1dr_CCAACCT_S20_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31850619	7592867	0.2358	58.8	18.6	4.17	0.112	5.44
fio011	fio011-b2e2l3p1	fio011-b2e2l3p1dr_CCAACCT_S20_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31738802	7466038	0.2344	58.8	19.3	4.16	0.109	5.63
fio011	fio011-b2e2l5p1	fio011-b2e2l5p1dr_AGAATTA_S22_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30228168	7358450	0.2343	58.5	16.1	4.43	0.108	5.28
fio011	fio011-b2e2l5p1	fio011-b2e2l5p1dr_AGAATTA_S22_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30536729	7313407	0.2345	58.6	17.7	4.30	0.107	5.41
fio011	fio011-b2e2l5p1	fio011-b2e2l5p1dr_AGAATTA_S22_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	29542370	7033803	0.2354	59.0	18.6	4.09	0.104	5.43
fio011	fio011-b2e2l3p1	fio011-b2e2l3p1dr_CCAACCT_S20_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	32753696	7892649	0.2361	58.3	17.7	4.38	0.115	5.51
fio011	fio011-b2e2l5p1	fio011-b2e2l5p1dr_AGAATTA_S22_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	29869393	7168115	0.2335	58.7	17.1	4.30	0.105	5.44
fio011	fio011-b2e2l3p1	fio011-b2e2l3p1dr_CCAACCT_S20_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	32567105	7950731	0.2352	58.2	16.1	4.48	0.116	6.23
fio011	fio011-b2e2l3p1	fio011-b2e2l3p1dr_CCAACCT_S20_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	32252118	7754692	0.2341	58.4	17.1	4.38	0.113	5.79
fio011	fio011-b2e2l5p1	fio011-b2e2l5p1dr_AGAATTA_S22_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	29474412	6911737	0.2335	59.0	19.3	4.09	0.102	5.54
fio011	fio011-b3e1l2p1	fio011-b3e1l2p1dr_TTCTAGG_S24_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35934574	5560048	0.1475	60.8	16.8	3.88	0.084	4.42
fio011	fio011-b3e1l1p1	fio011-b3e1l1p1dr_CAGCATC_S23_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	46016468	7169115	0.1527	59.1	18.3	4.76	0.105	5.66
fio011	fio011-b3e1l2p1	fio011-b3e1l2p1dr_TTCTAGG_S24_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	37007425	5838105	0.1474	60.1	14.6	4.15	0.087	4.70
fio011	fio011-b3e1l1p1	fio011-b3e1l1p1dr_CAGCATC_S23_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	46903197	7485319	0.1523	58.6	15.8	5.09	0.108	5.77
fio011	fio011-b3e1l1p1	fio011-b3e1l1p1dr_CAGCATC_S23_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	46535775	7304712	0.1516	58.8	16.8	4.98	0.106	5.97
fio011	fio011-b3e1l2p1	fio011-b3e1l2p1dr_TTCTAGG_S24_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	36567382	5676042	0.1464	60.3	15.5	4.04	0.085	4.62
fio011	fio011-b3e1l2p1	fio011-b3e1l2p1dr_TTCTAGG_S24_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	37276474	5799753	0.1477	60.1	16.1	4.04	0.087	4.57
fio011	fio011-b3e1l1p1	fio011-b3e1l1p1dr_CAGCATC_S23_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	45854644	7043054	0.1515	59.1	19.0	4.73	0.103	5.39
fio011	fio011-b3e1l1p1	fio011-b3e1l1p1dr_CAGCATC_S23_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	47224496	7433708	0.1528	58.6	17.4	4.96	0.107	5.92
fio011	fio011-b3e1l2p1	fio011-b3e1l2p1dr_TTCTAGG_S24_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35988706	5460470	0.1463	60.7	17.5	3.87	0.082	4.52
fio011	fio011-b3e1l3p1	fio011-b3e1l3p1dr_CCTCTAG_S25_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31139611	4582734	0.1430	60.7	18.0	4.19	0.069	4.48
fio011	fio011-b3e1l3p1	fio011-b3e1l3p1dr_CCTCTAG_S25_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31835657	4801751	0.1426	60.1	15.4	4.49	0.071	4.54
fio011	fio011-b3e1l3p1	fio011-b3e1l3p1dr_CCTCTAG_S25_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31569901	4682402	0.1418	60.2	16.5	4.39	0.070	4.47
fio011	fio011-b3e1l3p1	fio011-b3e1l3p1dr_CCTCTAG_S25_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31134467	4513365	0.1419	60.6	18.7	4.17	0.068	4.15
fio011	fio011-b3e2l3p1	fio011-b3e2l3p1dr_TAGTTCC_S30_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	27884007	4798697	0.1633	60.9	16.5	3.08	0.073	4.04
fio011	fio011-b3e2l3p1	fio011-b3e2l3p1dr_TAGTTCC_S30_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	27539416	4702642	0.1646	61.2	18.0	2.94	0.072	4.24
fio011	fio011-b3e2l3p1	fio011-b3e2l3p1dr_TAGTTCC_S30_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	28105067	4917013	0.1642	60.6	15.6	3.16	0.074	4.28
fio011	fio011-b3e2l3p1	fio011-b3e2l3p1dr_TAGTTCC_S30_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	27519327	4624207	0.1632	61.2	18.7	2.91	0.071	4.15
fio011	fio011-b3e2l2p1	fio011-b3e2l2p1dr_CCAGCGG_S29_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30625651	5337716	0.1678	60.3	16.8	4.23	0.080	4.37
fio011	fio011-b3e1l3p1	fio011-b3e1l3p1dr_CCTCTAG_S25_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	32056377	4773477	0.1433	60.2	17.1	4.38	0.071	4.73
fio011	fio011-b3e2l3p1	fio011-b3e2l3p1dr_TAGTTCC_S30_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	28325750	4885745	0.1646	60.7	17.1	3.07	0.074	4.38
fio011	fio011-b3e2l1p1	fio011-b3e2l1p1dr_AACGACC_S28_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	32156244	5733302	0.1670	59.9	15.6	3.19	0.085	4.75
fio011	fio011-b3e2l2p1	fio011-b3e2l2p1dr_CCAGCGG_S29_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30250878	5232511	0.1691	60.6	18.1	4.06	0.079	4.55
fio011	fio011-b3e2l1p1	fio011-b3e2l1p1dr_AACGACC_S28_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31346647	5384599	0.1662	60.5	18.6	2.98	0.081	4.58
fio011	fio011-b3e2l1p1	fio011-b3e2l1p1dr_AACGACC_S28_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31853637	5585669	0.1660	60.1	16.5	3.13	0.084	4.57
fio011	fio011-b3e2l2p1	fio011-b3e2l2p1dr_CCAGCGG_S29_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30930533	5473820	0.1689	60.0	15.9	4.33	0.082	4.72
fio011	fio011-b3e2l2p1	fio011-b3e2l2p1dr_CCAGCGG_S29_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31119012	5442036	0.1695	60.1	17.4	4.22	0.081	4.62
fio011	fio011-b3e2l2p1	fio011-b3e2l2p1dr_CCAGCGG_S29_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30191163	5153429	0.1679	60.6	18.7	4.02	0.078	4.27
fio011	fio011-b3e2l1p1	fio011-b3e2l1p1dr_AACGACC_S28_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	32320600	5692552	0.1677	59.9	17.1	3.12	0.085	4.75
fio011	fio011-b3e1l4p1	fio011-b3e1l4p1dr_CCGGATA_S26_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35342857	5197242	0.1452	61.3	19.2	4.03	0.079	4.25
fio011	fio011-b3e1l5p1	fio011-b3e1l5p1dr_GCCGCCCT_S27_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35830806	5150445	0.1424	61.6	19.2	4.27	0.079	4.47
fio011	fio011-b3e2l1p1	fio011-b3e2l1p1dr_AACGACC_S28_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31367377	5463423	0.1674	60.5	17.9	2.99	0.082	4.85
fio011	fio011-b3e1l4p1	fio011-b3e1l4p1dr_CCGGATA_S26_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35263316	5101902	0.1437	61.2	19.9	4.01	0.077	4.14
fio011	fio011-b3e1l5p1	fio011-b3e1l5p1dr_GCCGCCCT_S27_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	36060649	5325941	0.1422	61.0	16.5	4.61	0.081	4.45
fio011	fio011-b3e1l5p1	fio011-b3e1l5p1dr_GCCGCCCT_S27_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35692143	5044679	0.1412	61.6	19.9	4.27	0.077	4.38
fio011	fio011-b3e1l4p1	fio011-b3e1l4p1dr_CCGGATA_S26_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35881303	5410544	0.1446	60.7	16.5	4.34	0.082	4.33
fio011	fio011-b3e1l5p1	fio011-b3e1l5p1dr_GCCGCCCT_S27_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35984419	5214977	0.1411	61.2	17.5	4.49	0.079	4.47
fio011	fio011-b3e1l5p1	fio011-b3e1l5p1dr_GCCGCCCT_S27_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	36374151	5292403	0.1427	61.1	18.2	4.51	0.080	4.53
fio011	fio011-b3e1l4p1	fio011-b3e1l4p1dr_CCGGATA_S26_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	36201128	5382121	0.1452	60.7	18.2	4.22	0.081	4.35
fio011	fio011-b3e1l4p1	fio011-b3e1l4p1dr_CCGGATA_S26_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	35688659	5294467	0.1439	60.9	17.6	4.23	0.080	4.43
fio011	fio011-b3e2l5p1	fio011-b3e2l5p1dr_CGTATAT_S32_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	20940222	3398443	0.1611	63.0	19.7	3.37	0.053	2.89
fio011	fio011-b3e2l5p1	fio011-b3e2l5p1dr_CGTATAT_S32_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	21152085	3458176	0.1594	62.6	18.2	3.55	0.054	2.86
fio011	fio011-b3e2l5p1	fio011-b3e2l5p1dr_CGTATAT_S32_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	21315017	3545320	0.1603	62.3	17.1	3.66	0.055	3.04
fio011	fio011-b3e2l5p1	fio011-b3e2l5p1dr_CGTATAT_S32_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	21529976	3528329	0.1610	62.4	18.8	3.57	0.055	3.38
fio011	fio011-b3e2l5p1	fio011-b3e2l5p1dr_CGTATAT_S32_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	20965544	3342271	0.1594	63.0	20.5	3.37	0.052	3.00
fio011	fio011-b3e2l4p1	fio011-b3e2l4p1dr_TGGCAAT_S31_L005_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30884489	5111362	0.1619	60.8	18.2	4.21	0.077	4.81
fio011	fio011-b3e2l4p1	fio011-b3e2l4p1dr_TGGCAAT_S31_L006_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30787582	5005080	0.1610	61.1	19.3	4.10	0.076	4.49
fio011	fio011-b3e2l4p1	fio011-b3e2l4p1dr_TGGCAAT_S31_L007_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30568359	4848224	0.1614	61.4	21.7	3.88	0.074	4.37
fio011	fio011-b3e2l4p1	fio011-b3e2l4p1dr_TGGCAAT_S31_L004_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	30695116	4946794	0.1628	61.5	21.0	3.90	0.076	4.39
fio011	fio011-b3e2l4p1	fio011-b3e2l4p1dr_TGGCAAT_S31_L008_merged,161209_ST-E00280_0118_BHCGT7ALXX	12/9/2016	31228422	5083531	0.1625	60.9	20.0	4.09	0.077	4.39
fio011	fio011-b2e2l1p1	fio011-b2e2l1p1dr_AAAGACC_S34_L003_merged,160930_ST-E00216_0110_AH323WALXX	9/30/2016	28028004	7061131	0.2343	59.5	13.9	3.28	0.106	5.69
fio011	fio011-b2e2l2p1	fio011-b2e2l2p1dr_AGCCCTG_S35_L003_merged,160930_ST-E00216_0110_AH323WALXX	9/30/2016	32933452	8255576	0.2388	58.9	15.2	4.21	0.122	6.03
fio011	fio011-b2e2l3p1	fio011-b2e2l3p1dr_CCAACCT_S36_L003_merged,160930_ST-E00216_0110_AH323WALXX	9/30/2016	32283452	7951944	0.2352	58.6	15.2	4.41	0.117	6.01
fio011	fio011-b2e2l4p1	fio011-b2e2l4p1dr_GCAGAAAG_S37_L003_merged,160930_ST-E00216_0110_AH323WALXX</									

flo012		flo012-b10e11p1	flo012-b10e11p1_ATGGAGA_S106_L006_merged,160916_ST-E00280_0093_BH37N5ALXX	9/16/2016	59523270	30717	0.0017	67.6	47.7	31.64	0.000	0.22
flo012	flo012-b10e11p1	flo012-b10e11p1	flo012-b10e11p1_GACGGCG_S36_L004_merged,160617_ST-E00279_0088_AHLLVWCCXX	6/17/2016	11017935	7276	0.0007	65.9	11.2	17.73	0.000	0.05
flo012	flo012-b1e11p1	flo012-b1e11p1	flo012-b1e11p1_TACTTAG_S34_L004_merged,160617_ST-E00279_0088_AHLLVWCCXX	6/17/2016	16043452	17587	0.0019	80.5	15.9	38.92	0.000	0.01
flo012			flo012-b5e111_TAGTCTA_S8_L001_merged,151218_ST-E00279_0055_AHJWVTCXX	12/18/2015	58511561	89698	0.0019		12.6	23.34	0.002	0.25
flo013	flo013-b2e11p1	flo013-b2e11p1	flo013-b2e11p1_TCGCAGG_S78_L005_merged,160916_ST-E00280_0092_AH32GJALXX	9/16/2016	20969322	21066	0.0059	62.6	20.3	67.22	0.000	0.05
flo013			flo013-b1e111_TGCATGA_S9_L001_merged,151218_ST-E00279_0055_AHJWVTCXX	12/18/2015	41147465	32101	0.0029		21.7	58.06	0.001	0.03
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp2_GCTAATC_S40_L002_ARmerged,190604_A00605_0043_BH7VJYDRXX,all	6/4/2019	22477599	3610625	0.1533	58.3	18.1	4.24	0.050	2.43
flo014	flo014-b2e21p1	flo014-b2e21p1	flo014-b2e21p1_CTATGGC_S24_L002_ARmerged,190604_A00605_0043_BH7VJYDRXX,all	6/4/2019	20624735	4656826	0.2040	59.9	17.8	2.50	0.064	3.56
flo014	flo014-b1e112dr	flo014-b1e112dr	flo014-b1e112drp2_CCAGCGG_S37_L002_ARmerged,190604_A00605_0043_BH7VJYDRXX,all	6/4/2019	26708889	4064343	0.1528	53.2	19.2	8.99	0.050	2.14
flo014	flo014-b2e113dr	flo014-b2e113dr	flo014-b2e113drp1_AATAAGC_S16_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	63929111	9683584	0.1604	58.3	27.7	3.64	0.131	6.36
flo014	flo014-b1e114dr	flo014-b1e114dr	flo014-b1e114drp1_TTAACCT_S13_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	52701539	7838315	0.1555	54.7	26.5	5.10	0.098	4.23
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp1_GGCATAG_S11_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	57538019	8705426	0.1644	53.4	27.0	7.64	0.105	4.18
flo014	flo014-b1e113dr	flo014-b1e113dr	flo014-b1e113drp2_TAGTTC_S24_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	59000157	8512805	0.1602	53.6	30.1	6.28	0.103	4.16
flo014	flo014-b1e115dr	flo014-b1e115dr	flo014-b1e115drp2_CGTATAT_S26_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	64904484	9370336	0.1649	53.5	31.9	6.57	0.112	4.80
flo014	flo014-b1e113dr	flo014-b1e113dr	flo014-b1e113drp1_TTCAACC_S12_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	63575152	9530601	0.1607	53.6	27.0	6.50	0.116	4.74
flo014	flo014-b2e114dr	flo014-b2e114dr	flo014-b2e114drp1_AGCCTTG_S17_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	66696828	9616368	0.1568	58.4	29.9	3.59	0.129	6.39
flo014	flo014-b1e112dr	flo014-b1e112dr	flo014-b1e112drp2_CCAGCGG_S23_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	64560788	9346018	0.1612	53.3	29.1	7.59	0.112	4.52
flo014	flo014-b3e113dr	flo014-b3e113dr	flo014-b3e113drp1_AGAATTA_S20_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	60084691	7721545	0.1429	54.1	33.0	5.96	0.090	5.67
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp1_TGCATGA_S15_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	65619256	10094574	0.1650	58.1	28.7	3.68	0.136	6.39
flo014	flo014-b3e115dr	flo014-b3e115dr	flo014-b3e115drp1_TCTAGG_S22_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	66107892	8927177	0.1423	54.4	29.3	5.41	0.106	6.40
flo014	flo014-b3e114dr	flo014-b3e114dr	flo014-b3e114drp1_CAGCATC_S21_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	66758426	8635636	0.1418	53.7	31.0	6.71	0.101	6.06
flo014	flo014-b3e112dr	flo014-b3e112dr	flo014-b3e112drp1_GCAGAAG_S19_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	66599734	8512913	0.1510	52.8	34.4	8.43	0.097	5.92
flo014	flo014-b1e114dr	flo014-b1e114dr	flo014-b1e114drp2_TGGCAAT_S25_L005_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	72988291	10042224	0.1549	54.5	32.7	4.90	0.123	4.88
flo014	flo014-b2e115dr	flo014-b2e115dr	flo014-b2e115drp1_CCAACCT_S18_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	75188482	11173817	0.1632	58.0	30.5	3.76	0.149	7.26
flo014	flo014-b1e115dr	flo014-b1e115dr	flo014-b1e115drp1_TAGTCTA_S14_L004_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	71782515	10859912	0.1679	53.3	29.3	6.94	0.130	5.27
flo014	flo014-b3e112dr	flo014-b3e112dr	flo014-b3e112drp2_CGACGCC_S12_L004_ARmerged,180921_ST-E00215_0292_AHNYHCCXY,all	9/21/2018	60601179	7129360	0.1434	53.3	37.6	7.68	0.081	4.70
flo014	flo014-b3e115dr	flo014-b3e115dr	flo014-b3e115drp2_CCTAGGT_S15_L004_ARmerged,180921_ST-E00215_0292_AHNYHCCXY,all	9/21/2018	65693654	7829753	0.1399	54.5	38.6	4.62	0.091	5.15
flo014	flo014-b2e113dr	flo014-b2e113dr	flo014-b2e113drp2_GACTTCT_S10_L004_ARmerged,180921_ST-E00215_0292_AHNYHCCXY,all	9/21/2018	67208611	8441741	0.1548	58.9	40.0	2.89	0.112	5.57
flo014	flo014-b3e114dr	flo014-b3e114dr	flo014-b3e114drp2_CTCTGCA_S14_L004_ARmerged,180921_ST-E00215_0292_AHNYHCCXY,all	9/21/2018	66282896	7936689	0.1433	53.7	38.4	5.96	0.090	5.40
flo014	flo014-b3e113dr	flo014-b3e113dr	flo014-b3e113drp2_TCGCAGG_S13_L004_ARmerged,180921_ST-E00215_0292_AHNYHCCXY,all	9/21/2018	76935424	8397919	0.1366	54.3	42.6	4.97	0.095	5.93
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp2_GCTAATC_S9_L004_ARmerged,180921_ST-E00215_0292_AHNYHCCXY,all	9/21/2018	79648283	10389937	0.1600	58.5	39.6	2.98	0.137	6.64
flo014	flo014-b2e115dr	flo014-b2e115dr	flo014-b2e115drp2_CGAGATC_S11_L004_ARmerged,180921_ST-E00279_0215_AHMMTMCCXY,all	9/21/2018	93119933	11840271	0.1594	58.5	40.9	3.10	0.155	7.46
flo014	flo014-b1e113dr	flo014-b1e113dr	flo014-b1e113drp2_TAGTTC_S14_L003_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	60440477	8681600	0.1610	53.4	31.0	6.22	0.104	4.15
flo014	flo014-b1e113dr	flo014-b1e113dr	flo014-b1e113drp1_TTCAACC_S2_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	64463674	9628584	0.1602	53.6	27.2	6.44	0.117	4.64
flo014	flo014-b1e115dr	flo014-b1e115dr	flo014-b1e115drp1_TAGTCTA_S24_L008_ARmerged,180731_ST-E00215_0281_BHMLHCCXY,all	7/31/2018	74989744	11365355	0.1681	53.0	29.2	7.04	0.136	5.82
flo014	flo014-b1e113dr	flo014-b1e113dr	flo014-b1e113drp2_TAGTTC_S14_L002_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	60860096	8477906	0.1607	53.4	30.8	6.21	0.105	4.35
flo014	flo014-b1e115dr	flo014-b1e115dr	flo014-b1e115drp1_TAGTCTA_S4_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	73462643	11053192	0.1674	53.2	29.6	6.87	0.133	5.28
flo014	flo014-b1e114dr	flo014-b1e114dr	flo014-b1e114drp1_TTAACCT_S3_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	53876131	7974972	0.1551	54.7	26.8	5.04	0.099	4.06
flo014	flo014-b1e112dr	flo014-b1e112dr	flo014-b1e112drp1_GGCATAG_S1_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	58753627	8852922	0.1640	53.4	27.3	7.52	0.107	4.24
flo014	flo014-b1e115dr	flo014-b1e115dr	flo014-b1e115drp2_CGTATAT_S16_L003_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	67769011	9701370	0.1656	53.3	32.9	6.50	0.115	4.63
flo014	flo014-b1e113dr	flo014-b1e113dr	flo014-b1e113drp1_TTCAACC_S22_L008_ARmerged,180731_ST-E00215_0281_BHMLHCCXY,all	7/31/2018	65833903	9900370	0.1609	53.4	26.9	6.58	0.120	4.67
flo014	flo014-b1e112dr	flo014-b1e112dr	flo014-b1e112drp1_GGCATAG_S21_L008_ARmerged,180731_ST-E00215_0281_BHMLHCCXY,all	7/31/2018	59714314	9060763	0.1646	53.1	26.9	7.73	0.109	4.63
flo014	flo014-b1e114dr	flo014-b1e114dr	flo014-b1e114drp2_TGGCAAT_S15_L002_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	74655372	10241565	0.1554	54.3	33.3	4.83	0.124	4.86
flo014	flo014-b1e112dr	flo014-b1e112dr	flo014-b1e112drp2_CCAGCGG_S13_L003_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	66642775	9610264	0.1621	53.1	30.0	7.46	0.114	4.71
flo014	flo014-b1e115dr	flo014-b1e115dr	flo014-b1e115drp2_CGTATAT_S16_L002_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	66157822	9529881	0.1623	53.1	30.1	7.49	0.113	4.53
flo014	flo014-b1e114dr	flo014-b1e114dr	flo014-b1e114drp1_TTAACCT_S23_L008_ARmerged,180731_ST-E00215_0281_BHMLHCCXY,all	7/31/2018	68400628	9786049	0.1650	53.4	32.8	6.48	0.117	4.82
flo014	flo014-b1e114dr	flo014-b1e114dr	flo014-b1e114drp2_TGGCAAT_S15_L003_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	54726650	8163170	0.1558	54.4	26.5	5.19	0.101	3.99
flo014	flo014-b2e115dr	flo014-b2e115dr	flo014-b2e115drp2_CGAGATC_S20_L004_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	74146705	10174652	0.1557	54.3	33.4	4.86	0.123	5.22
flo014	flo014-b2e114dr	flo014-b2e114dr	flo014-b2e114drp1_AGCCTTG_S27_L008_ARmerged,180731_ST-E00215_0281_BHMLHCCXY,all	7/31/2018	77799523	11090419	0.1626	57.8	33.7	3.60	0.146	6.74
flo014	flo014-b2e113dr	flo014-b2e113dr	flo014-b2e113drp1_AATAAGC_S26_L008_ARmerged,180731_ST-E00215_0281_BHMLHCCXY,all	7/31/2018	68416745	9923817	0.1573	58.0	29.7	3.65	0.133	6.61
flo014	flo014-b2e114dr	flo014-b2e114dr	flo014-b2e114drp1_AGCCTTG_S7_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	65838526	10017609	0.1609	58.0	27.6	3.70	0.134	6.65
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp1_TGCATGA_S5_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	67796155	9737258	0.1564	58.3	30.1	3.55	0.131	6.47
flo014	flo014-b2e115dr	flo014-b2e115dr	flo014-b2e115drp1_CCAACCT_S8_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	66984667	10244065	0.1645	58.1	29.0	3.65	0.137	6.71
flo014	flo014-b2e113dr	flo014-b2e113dr	flo014-b2e113drp1_AATAAGC_S6_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	76230188	11314928	0.1630	58.0	30.6	3.71	0.151	7.41
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp1_TGCATGA_S5_L001_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	65208364	9832013	0.1602	58.3	28.1	3.60	0.132	6.47
flo014	flo014-b2e115dr	flo014-b2e115dr	flo014-b2e115drp2_CGAGATC_S20_L005_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	67710048	10456847	0.1653	57.8	28.5	3.74	0.139	6.55
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp2_GCTAATC_S17_L005_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	76743069	11454170	0.1634	57.8	30.3	3.84	0.152	6.95
flo014	flo014-b2e113dr	flo014-b2e113dr	flo014-b2e113drp2_GACTTCT_S18_L004_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	64155305	9814507	0.1634	57.8	28.5	3.71	0.131	6.53
flo014	flo014-b2e115dr	flo014-b2e115dr	flo014-b2e115drp1_CCAACCT_S28_L008_ARmerged,180731_ST-E00215_0281_BHMLHCCXY,all	7/31/2018	71581734	10032140	0.1580	58.2	33.1	3.35	0.133	6.50
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp2_GCTAATC_S17_L004_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	77049678	11547413	0.1639	57.7	30.2	3.81	0.153	7.19
flo014	flo014-b2e112dr	flo014-b2e112dr	flo014-b2e112drp2_GCTAATC_S17_L004_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	64768381	9473404	0.1629	57.9	32.0	3.48	0.126	6.07
flo014	flo014-b2e113dr	flo014-b2e113dr	flo014-b2e113drp2_GACTTCT_S18_L005_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	70501004	10369807	0.1585	58.1	29.3	3.59	0.139	6.89
flo014	f											

fio016	fio016-b2e11p1	fio016-b2e11p1_CAATTAC_S50_L004_ARmerged,180302_ST-E00216_0240_BHH7TGCCXY,all	3/2/2018	28072580	147432	0.0063	60.9	28.0	11.80	0.002	0.08
fio017	fio017-b1e21p1	fio017-b1e21p1_TAATGCG_S53_L006_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	19934413	20148	0.0046	62.1	27.9	63.42	0.000	0.01
fio017	fio017-b2e11p1	fio017-b2e11p1_ATGCCCG_S52_L004_ARmerged,180302_ST-E00216_0240_BHH7TGCCXY,all	3/2/2018	24879079	22857	0.0035	56.8	21.5	61.93	0.000	0.02
fio017	fio017-b1e11p1	fio017-b1e11p1_CCGATTG_S51_L004_ARmerged,180302_ST-E00216_0240_BHH7TGCCXY,all	3/2/2018	26536596	45428	0.0032	61.6	22.6	48.66	0.000	0.04
fio018	fio018-b1e21p1	fio018-b1e21p1_CGGCGTA_S27_L002_ARmerged,190604_A00605_0043_BH7VJYDRXX,all	6/4/2019	22860516	3372129	0.1393	68.3	18.8	1.03	0.056	2.92
fio018	fio018-b1e31dr	fio018-b1e31drp1_AATTCAA_S16_L001_ARmerged,190604_A00605_0043_BH7VJYDRXX,all	6/4/2019	21772287	1053256	0.0514	60.0	22.5	5.98	0.015	1.27
fio018	fio018-b1e31dr	fio018-b1e31drp1_AATTCAA_S23_L002_ARmerged-N,190418_ST-E00215_0353_AHYCL3CCXY,all	4/18/2019	31335024	1378181	0.0570	58.7	37.2	6.26	0.019	1.55
fio018	fio018-b2e113dr	fio018-b2e113drp2_CCGATTG_S10_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	54314817	7879964	0.1593	57.1	29.2	4.74	0.104	6.23
fio018	fio018-b2e112dr	fio018-b2e112drp2_AGATAGG_S9_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	54617927	8162929	0.1614	57.7	29.0	3.63	0.109	6.51
fio018	fio018-b3e114dr	fio018-b3e114drp2_TCATGGT_S15_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	55257247	7940502	0.1572	58.5	29.9	3.09	0.109	6.85
fio018	fio018-b2e115dr	fio018-b2e115drp2_CAGTACT_S12_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	64523062	9684572	0.1634	57.7	29.6	3.80	0.129	7.43
fio018	fio018-b2e114dr	fio018-b2e114drp2_ATGCCCG_S11_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	65119144	9971481	0.1651	56.9	28.3	4.32	0.131	7.65
fio018	fio018-b3e113dr	fio018-b3e113drp2_CATCCGG_S14_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	58589210	9064691	0.1709	57.3	28.9	4.74	0.121	7.49
fio018	fio018-b3e115dr	fio018-b3e115drp2_AGAACCG_S16_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	63963590	9317779	0.1578	58.6	28.2	3.81	0.128	8.15
fio018	fio018-b3e112dr	fio018-b3e112drp2_AATAGTA_S13_L003_ARmerged-N,190125_ST-E00215_0329_AHWLYHCCXY,all	1/25/2019	72586564	11209863	0.1753	58.2	31.9	3.81	0.152	9.43
fio018	fio018-b1e112dr	fio018-b1e112drp2_CAATATG_S47_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	47795386	5635154	0.1324	56.9	31.6	3.35	0.075	3.83
fio018	fio018-b1e114dr	fio018-b1e114drp1_TTGATC_S37_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	56394163	6321141	0.1320	56.8	35.4	3.19	0.083	4.38
fio018	fio018-b3e115dr	fio018-b3e115drp1_GATCTCG_S46_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	48797615	6982863	0.1541	59.9	28.9	2.51	0.098	6.69
fio018	fio018-b1e115dr	fio018-b1e115drp1_CGACCTG_S38_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	57563198	6270819	0.1278	57.8	35.4	2.82	0.084	4.32
fio018	fio018-b1e115dr	fio018-b1e115drp2_CAATTAC_S50_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	60724633	7275895	0.1337	57.3	31.3	3.20	0.097	4.85
fio018	fio018-b2e115dr	fio018-b2e115drp1_GAATCTC_S42_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	56548180	7860218	0.1571	59.4	34.0	2.21	0.107	6.41
fio018	fio018-b2e113dr	fio018-b2e113drp1_AGGTACC_S40_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	60363730	8041653	0.1531	58.5	34.5	2.84	0.108	6.55
fio018	fio018-b2e112dr	fio018-b2e112drp1_TAATGCG_S39_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	58907055	8067158	0.1552	59.0	34.1	2.18	0.110	6.52
fio018	fio018-b3e113dr	fio018-b3e113drp1_ACGCAAC_S44_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	59945944	8675078	0.1634	58.5	32.5	2.96	0.118	7.55
fio018	fio018-b1e113dr	fio018-b1e113drp2_TGACGTC_S48_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	64383073	7711566	0.1349	56.8	31.5	3.67	0.102	5.28
fio018	fio018-b1e113dr	fio018-b1e113drp1_ACTATCA_S36_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	69551286	7758127	0.1336	56.6	36.3	3.44	0.101	5.32
fio018	fio018-b1e112dr	fio018-b1e112drp1_TTGAAGT_S35_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	72967401	7867507	0.1300	57.1	37.3	2.94	0.103	5.23
fio018	fio018-b3e114dr	fio018-b3e114drp1_GCATGGG_S45_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	62082165	8685802	0.1538	60.0	31.2	1.94	0.122	8.00
fio018	fio018-b2e114dr	fio018-b2e114drp1_TGCGTCC_S41_L007_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	70633659	9657754	0.1587	58.2	35.7	2.50	0.128	7.49
fio018	fio018-b1e114dr	fio018-b1e114drp2_GATGCCA_S49_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	75309860	9053645	0.1349	56.6	31.4	3.60	0.119	6.17
fio018	fio018-b3e112dr	fio018-b3e112drp1_CATGCTC_S43_L008_ARmerged,180921_ST-E00279_0225_BHNGN5CCXY,all	9/21/2018	67532900	10300182	0.1707	59.7	32.0	2.46	0.144	8.97
fio018	fio018-b2e115dr	fio018-b2e115drp1_GAATCTC_S40_L007_ARmerged,180731_ST-E00279_0216_AHMMTMCCXY,all	7/31/2018	53453892	8152776	0.1606	58.7	28.2	2.54	0.111	6.61
fio018	fio018-b2e115dr	fio018-b2e115drp2_CAGTACT_S12_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	68710959	10441230	0.1606	58.5	28.5	2.63	0.142	8.52
fio018	fio018-b2e114dr	fio018-b2e114drp2_ATGCCCG_S11_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	69776580	10800714	0.1629	57.7	27.8	2.96	0.145	8.68
fio018	fio018-b2e113dr	fio018-b2e113drp1_AGGTACC_S38_L008_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	58531375	8147768	0.1564	58.0	32.8	3.01	0.109	6.55
fio018	fio018-b2e115drp1	fio018-b2e115drp1_GAATCTC_S40_L008_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	55525914	8056992	0.1607	58.7	32.4	2.36	0.109	6.24
fio018	fio018-b2e114drp2	fio018-b2e114drp2_ATGCCCG_S11_L003_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	69686501	10239193	0.1634	57.7	32.4	2.75	0.136	7.66
fio018	fio018-b2e112drp1	fio018-b2e112drp1_TAATGCG_S37_L007_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	56024146	8369369	0.1586	58.4	28.9	2.45	0.114	6.61
fio018	fio018-b2e114drp1	fio018-b2e114drp1_TGCGTCC_S39_L007_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	65342544	9866201	0.1624	57.7	29.6	2.85	0.132	7.96
fio018	fio018-b2e115drp2	fio018-b2e115drp2_CAGTACT_S12_L003_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	69300663	9939320	0.1615	58.5	33.7	2.43	0.133	8.04
fio018	fio018-b2e114drp1	fio018-b2e114drp1_TGCGTCC_S39_L008_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	68170012	9758639	0.1621	57.7	33.9	2.66	0.129	7.52
fio018	fio018-b2e112drp2	fio018-b2e112drp2_AGATAGG_S9_L003_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	57683181	8276910	0.1603	58.5	33.0	2.31	0.111	6.56
fio018	fio018-b2e113drp2	fio018-b2e113drp2_CCGATTG_S10_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	57577748	8440728	0.1561	57.8	28.3	3.35	0.113	6.97
fio018	fio018-b2e113drp1	fio018-b2e113drp1_CCGATTG_S10_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	57716596	8019629	0.1567	57.8	33.1	3.08	0.106	6.49
fio018	fio018-b1e115drp2	fio018-b1e115drp2_CAATTAC_S8_L002_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	64531756	8255361	0.1351	56.7	26.7	3.52	0.110	5.98
fio018	fio018-b2e113drp1	fio018-b2e113drp1_AGGTACC_S38_L007_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	56602220	8273029	0.1564	57.9	28.8	3.22	0.111	6.72
fio018	fio018-b1e115drp1	fio018-b1e115drp1_CGACCTG_S36_L007_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	52995609	6410605	0.1316	57.2	29.4	3.20	0.086	4.48
fio018	fio018-b3e112drp2	fio018-b3e112drp2_AATAGTA_S13_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	76866969	12115699	0.1743	58.8	31.1	2.68	0.166	10.29
fio018	fio018-b1e114drp2	fio018-b1e114drp2_GATGCCA_S7_L002_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	80914105	10349326	0.1370	56.1	27.5	3.92	0.136	6.98
fio018	fio018-b2e112drp2	fio018-b2e112drp2_AGATAGG_S9_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	57274356	8695134	0.1597	58.5	28.0	2.51	0.118	7.06
fio018	fio018-b1e113drp2	fio018-b1e113drp2_TGACGTC_S6_L002_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	68356602	8736271	0.1370	56.3	27.4	4.00	0.115	5.95
fio018	fio018-b3e112drp1	fio018-b3e112drp1_CATGCTC_S1_L002_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	72515249	11785634	0.1734	59.0	28.2	2.68	0.164	10.47
fio018	fio018-b2e112drp1	fio018-b2e112drp1_TAATGCG_S37_L008_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	57771735	8238897	0.1586	58.5	32.7	2.30	0.111	6.52
fio018	fio018-b1e115drp1	fio018-b1e115drp1_CGACCTG_S36_L008_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	55308812	6338347	0.1314	57.3	33.7	2.99	0.084	4.36
fio018	fio018-b1e112drp2	fio018-b1e112drp2_CAATATG_S5_L001_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	50882026	6114299	0.1339	56.5	31.0	3.46	0.080	4.02
fio018	fio018-b1e113drp1	fio018-b1e113drp1_ACTATCA_S34_L007_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	65798377	8046129	0.1364	56.1	30.7	3.88	0.105	5.43
fio018	fio018-b1e114drp1	fio018-b1e114drp1_TTGATC_S35_L007_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	52908238	6528916	0.1351	56.2	29.5	3.63	0.086	4.38
fio018	fio018-b1e115drp2	fio018-b1e115drp2_CAATTAC_S8_L001_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	64306815	7892893	0.1355	56.9	30.4	3.29	0.105	5.36
fio018	fio018-b3e112drp1	fio018-b3e112drp1_CATGCTC_S1_L001_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	72202297	11253239	0.1733	59.1	31.7	2.52	0.155	9.89
fio018	fio018-b1e114drp1	fio018-b1e114drp1_TTGATC_S35_L008_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	54891016	6425616	0.1349	56.2	33.7	3.38	0.083	4.07
fio018	fio018-b3e112drp2	fio018-b3e112drp2_AATAGTA_S13_L003_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	77194087	11503226	0.1753	58.9	36.0	2.46	0.156	10.27
fio018	fio018-b3e115drp1	fio018-b3e115drp1_GATCTCG_S4_L002_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	52987931	8057365	0.1565	59.3	25.2	2.74	0.113	7.16
fio018	fio018-b1e114drp2	fio018-b1e114drp2_GATGCCA_S7_L001_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	80468524	9863352	0.1367	56.2	31.0	3.68	0.129	6.42
fio018	fio018-b1e112drp1	fio018-b1e112drp1_TTGAAGT_S33_L008_ARmerged,180731_ST-E00279_0215_AHMMTMCCXY,all	7/31/2018	70816346	7995226	0.1329	56.6	35.5	3.11	0.104	5.48
fio018	fio018-b3e113drp1	fio018-b3e113drp1_ACGCAAC_S2_L001_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	63034650	9360224	0.1658	58.1	31.7	3.05	0.126	8.09
fio018	fio018-b3e115drp2	fio018-b3e115drp2_AGAACCG_S16_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	67206938	9914517	0.1557	59.3	27.3	2.68	0.138	9.01
fio018	fio018-b3e113drp2	fio018-b3e113drp2_CATCCGG_S14_L004_ARmerged,180731_ST-E00279_0216_BHNM2WCCXY,all	7/31/2018	61953431							

fio022	fio022-b2e11p1	fio022-b2e11p1_AGCAGGT_S5_L001_ARmerged,180302_ST-E00216_0240_BHH7TGCCXY,all	3/2/2018	31994466	40315	0.0029	62.4	18.8	49.36	0.001	0.66
fio022	fio022-b1e11p1	fio022-b1e11p1_ACTGGAG_S4_L001_ARmerged,180302_ST-E00216_0240_BHH7TGCCXY,all	3/2/2018	36968950	542063	0.0166	66.7	24.1	7.85	0.009	0.63
fio023	fio023-b1e31dr	fio023-b1e31drp1_CGCGCAG_S24_L002_ARmerged-N,190418_ST-E00215_0353_AHYCL3CCXY,all	4/18/2019	34133839	142575	0.0123	57.0	55.1	22.06	0.002	0.18
fio023	fio023-b3e115dr	fio023-b3e115drp1_AATAAGC_S14_L003_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	47941279	3251223	0.0851	52.8	26.1	14.74	0.041	3.25
fio023	fio023-b3e114dr	fio023-b3e114drp1_AACCTGC_S13_L003_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	54618789	3658663	0.0776	54.1	25.7	10.12	0.047	4.10
fio023	fio023-b1e112dr	fio023-b1e112drp1_AGAACCG_S22_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	49672649	4005197	0.1141	53.0	34.9	13.47	0.049	3.87
fio023	fio023-b3e113dr	fio023-b3e113drp1_AGCAGGT_S10_L003_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	53232296	3770005	0.0835	53.3	27.7	9.63	0.047	3.86
fio023	fio023-b3e112dr	fio023-b3e112drp1_CAGGAGG_S9_L003_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	59470360	4332711	0.0874	52.8	27.7	10.55	0.054	4.21
fio023	fio023-b1e114dr	fio023-b1e114drp1_GCCTACG_S26_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	61864521	4297413	0.1029	53.1	36.2	14.89	0.053	3.75
fio023	fio023-b1e113dr	fio023-b1e113drp1_AAGGTCT_S23_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	60381238	4743078	0.1067	53.9	37.6	8.98	0.059	4.35
fio023	fio023-b1e112dr	fio023-b1e112drp2_CTATGGC_S24_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	63115787	4740362	0.1090	53.0	36.7	13.25	0.058	4.43
fio023	fio023-b1e113dr	fio023-b1e113drp2_ATACTGA_S25_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	66126014	5164429	0.1071	53.6	37.8	9.39	0.064	4.47
fio023	fio023-b3e114dr	fio023-b3e114drp2_CCGGATA_S15_L003_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	71168112	4726188	0.0787	54.0	27.5	10.03	0.060	4.93
fio023	fio023-b3e112dr	fio023-b3e112drp2_AACCAAG_S11_L003_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	63648480	4455748	0.0852	52.7	28.8	10.43	0.055	4.33
fio023	fio023-b1e115dr	fio023-b1e115drp1_TAGTCTA_S27_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	63356519	4868647	0.1109	52.6	37.2	12.66	0.059	4.36
fio023	fio023-b3e115dr	fio023-b3e115drp2_GACTTCT_S16_L003_ARmerged,181102_ST-E00215_0288_AHTV7TCCXY,all	11/2/2018	64938587	4366603	0.0861	52.8	27.7	14.49	0.054	4.40
fio023	fio023-b1e114dr	fio023-b1e114drp2_TCTAGG_S28_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	69130201	4888186	0.1041	53.2	35.7	15.07	0.060	4.76
fio023	fio023-b1e115dr	fio023-b1e115drp2_CGTATAT_S29_L008_ARmerged,181102_ST-E00216_0265_AHTV5YCCXY,all	11/2/2018	65438363	4883122	0.1095	52.7	38.3	12.51	0.059	4.39
fio023	fio023-b3e113dr	fio023-b3e113drp2_AAGCTAA_S12_L003_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	78906224	5516222	0.0845	53.0	29.4	9.70	0.069	5.49
fio023	fio023-b2e114dr	fio023-b2e114drp1_TAAATCAT_S5_L002_ARmerged,181102_ST-E00215_0288_AHTV7TCCXY,all	11/2/2018	117913572	21128704	0.2178	53.3	34.7	6.21	0.257	15.09
fio023	fio023-b2e112dr	fio023-b2e112drp2_CGACGGT_S3_L001_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	107180403	19404189	0.2392	51.3	37.4	8.69	0.226	13.70
fio023	fio023-b2e115dr	fio023-b2e115drp1_TGCATGA_S6_L002_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	117251658	21949375	0.2429	51.7	32.4	11.92	0.262	15.27
fio023	fio023-b2e114dr	fio023-b2e114drp2_CCTCTAG_S7_L002_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	125576632	23150088	0.2197	53.2	33.2	6.43	0.283	17.03
fio023	fio023-b2e113dr	fio023-b2e113drp2_TACTTAG_S4_L001_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	122650739	23429040	0.2393	51.7	36.8	6.37	0.275	16.69
fio023	fio023-b2e115dr	fio023-b2e115drp2_GCTAATC_S8_L002_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	131694722	24331674	0.2390	51.7	32.1	11.97	0.290	17.73
fio023	fio023-b2e112dr	fio023-b2e112drp1_TGGAATA_S1_L001_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	124376836	22931911	0.2462	51.4	38.1	8.58	0.267	15.76
fio023	fio023-b2e113dr	fio023-b2e113drp1_ACTGGAC_S2_L001_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	14197737	26676174	0.2384	51.8	37.7	6.28	0.312	19.33
fio023	fio023-b1e112dr	fio023-b1e112drp2_CTATGGC_S7_L001_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	66265399	4698079	0.1103	53.1	41.8	12.12	0.057	4.20
fio023	fio023-b1e112dr	fio023-b1e112drp1_AGAACCG_S1_L002_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	50841164	3952248	0.1159	53.0	38.8	12.65	0.048	3.68
fio023	fio023-b1e112dr	fio023-b1e112drp2_CTATGGC_S7_L002_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	66291830	4816885	0.1110	53.1	40.5	12.44	0.059	4.60
fio023	fio023-b3e112dr	fio023-b3e112drp2_AACCAAG_S9_L003_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	70235995	4331907	0.0846	52.8	38.3	9.08	0.053	4.23
fio023	fio023-b3e112dr	fio023-b3e112drp1_AACCAAG_S9_L004_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	69650000	4315457	0.0852	52.8	38.2	9.10	0.053	4.26
fio023	fio023-b3e114dr	fio023-b3e114drp1_AACCTGC_S15_L003_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	60825646	3600025	0.0771	54.2	35.3	8.82	0.045	3.69
fio023	fio023-b3e112dr	fio023-b3e112drp1_CAGGAGG_S3_L002_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	71510485	4525872	0.0872	52.9	38.5	9.01	0.055	4.48
fio023	fio023-b3e114dr	fio023-b3e114drp1_AACCTGC_S15_L004_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	60380752	3607195	0.0777	54.1	35.2	8.87	0.045	3.65
fio023	fio023-b1e112dr	fio023-b1e112drp1_AGAACCG_S1_L001_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	50569570	3836573	0.1154	53.1	40.2	12.35	0.047	3.35
fio023	fio023-b3e115dr	fio023-b3e115drp1_AATAAGC_S18_L005_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	53555641	3180892	0.0852	52.9	37.1	12.47	0.039	2.96
fio023	fio023-b3e112dr	fio023-b3e112drp1_CAGGAGG_S3_L001_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	71538610	4414800	0.0868	52.9	40.1	8.76	0.054	4.28
fio023	fio023-b1e114dr	fio023-b1e114drp1_GCCTACG_S13_L004_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	63946360	4367953	0.1046	53.1	38.6	14.36	0.053	3.91
fio023	fio023-b1e113dr	fio023-b1e113drp2_ATACTGA_S10_L003_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	69395271	5266067	0.1077	53.6	40.3	9.01	0.065	4.76
fio023	fio023-b1e113dr	fio023-b1e113drp2_ATACTGA_S10_L004_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	68986038	5282070	0.1084	53.6	40.2	9.05	0.065	5.01
fio023	fio023-b3e114dr	fio023-b3e114drp2_CCGGATA_S21_L006_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	79822290	4502189	0.0789	54.1	40.5	8.29	0.056	4.75
fio023	fio023-b1e114dr	fio023-b1e114drp1_GCCTACG_S13_L003_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	64383174	4367430	0.1041	53.1	38.8	14.31	0.053	3.89
fio023	fio023-b1e114dr	fio023-b1e114drp2_TCTAGG_S19_L006_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	70360515	4749328	0.1052	53.3	39.9	14.02	0.058	4.22
fio023	fio023-b1e114dr	fio023-b1e114drp2_TCTAGG_S19_L005_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	70305351	4765347	0.1052	53.3	39.6	14.10	0.058	4.43
fio023	fio023-b2e112dr	fio023-b2e112drp1_TGGAATA_S2_L001_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	69667157	11579259	0.2431	51.5	44.6	7.64	0.133	7.70
fio023	fio023-b1e115dr	fio023-b1e115drp2_CGTATAT_S22_L006_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	64200892	4586841	0.1111	52.8	42.5	11.57	0.055	3.97
fio023	fio023-b3e115dr	fio023-b3e115drp2_GACTTCT_S24_L005_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	82378012	4722701	0.0860	52.9	40.1	12.00	0.057	4.59
fio023	fio023-b2e112dr	fio023-b2e112drp2_CGACGGT_S8_L002_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	57904062	9764313	0.2370	51.5	42.0	8.00	0.113	7.05
fio023	fio023-b1e115dr	fio023-b1e115drp1_TAGTCTA_S16_L004_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	61278445	4620399	0.1122	52.7	39.4	12.26	0.056	4.18
fio023	fio023-b3e115dr	fio023-b3e115drp1_AATAAGC_S18_L006_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	53570155	3168950	0.0853	52.9	37.5	12.36	0.039	2.90
fio023	fio023-b2e112dr	fio023-b2e112drp2_CGACGGT_S8_L001_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	58392581	9565899	0.2356	51.5	43.6	7.74	0.110	6.68
fio023	fio023-b3e113dr	fio023-b3e113drp2_AAGCTAA_S12_L004_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	85814180	5331938	0.0851	53.1	39.1	8.43	0.065	5.32
fio023	fio023-b1e113dr	fio023-b1e113drp1_AAGGTCT_S4_L002_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	66692693	5010466	0.1079	54.0	41.7	8.41	0.062	4.66
fio023	fio023-b3e115dr	fio023-b3e115drp2_GACTTCT_S24_L006_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	82478955	4701858	0.0860	52.9	40.5	11.92	0.057	4.48
fio023	fio023-b3e113dr	fio023-b3e113drp2_AAGCTAA_S12_L003_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	86578371	5335015	0.0845	53.1	39.2	8.41	0.065	5.47
fio023	fio023-b3e113dr	fio023-b3e113drp1_AGCAGGT_S6_L002_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	63301063	3873827	0.0834	53.4	39.1	8.11	0.047	3.96
fio023	fio023-b1e113dr	fio023-b1e113drp1_AAGGTCT_S4_L001_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	66873412	4889590	0.1075	54.1	43.3	8.16	0.060	4.56
fio023	fio023-b2e112dr	fio023-b2e112drp1_TGGAATA_S2_L002_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	69234030	11845153	0.2440	51.5	42.9	7.91	0.136	8.14
fio023	fio023-b1e115dr	fio023-b1e115drp1_TAGTCTA_S16_L003_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	61668950	4614743	0.1115	52.7	39.5	12.19	0.056	4.10
fio023	fio023-b1e115dr	fio023-b1e115drp2_CGTATAT_S22_L005_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	64134700	4602143	0.1109	52.8	42.1	11.63	0.055	4.10
fio023	fio023-b2e115dr	fio023-b2e115drp1_TGCATGA_S17_L005_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	57174702	9528517	0.2397	51.9	40.4	10.50	0.111	6.74
fio023	fio023-b3e114dr	fio023-b3e114drp2_CCGGATA_S21_L005_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	79708009	4521562	0.0789	54.1	40.1	8.37	0.056	4.49
fio023	fio023-b2e114dr	fio023-b2e114drp2_CCTCTAG_S20_L006_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	59788742	9683753	0.2159	53.4	40.8	5.65	0.116	7.20
fio023	fio023-b2e114dr	fio023-b2e114drp1_TAAATCAT_S14_L003_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	51391909	8523150	0.2150	53.5	39.8	5.64	0.103	6.26
fio023	fio023-b3e113dr	fio023-b3e113drp1_AGCAGGT_S6_L001_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	63600337	3783324	0.0830	53.4	40.8	7.87	0.046	3.83
fio023	fio023-b2e115dr	fio023-b2e115drp2_GCTAATC_S23_L005_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	60210458	9925154	0.2362	51.9	40.2	10.47	0.116	7.14
fio02											

fio026	fio026-b2e113dr	fio026-b2e113drp2_AGAAGAC_S28_L005_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	70118667	4061609	0.0643	59.3	28.6	5.03	0.057	3.59
fio026	fio026-b1e115dr	fio026-b1e115drp2_GTACTAT_S24_L004_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	74774126	1705309	0.0262	64.7	25.5	8.97	0.026	1.83
fio026	fio026-b2e112dr	fio026-b2e112drp1_GCAATGC_S25_L005_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	85715494	5020012	0.0654	59.5	28.6	5.22	0.070	5.01
fio026	fio026-b3e114dr	fio026-b3e114drp1_GGCATAG_S35_L006_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	72304350	8256398	0.1211	62.3	26.6	4.00	0.121	8.96
fio026	fio026-b3e115dr	fio026-b3e115drp2_GCGAGCC_S38_L006_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	79082488	9661039	0.1351	61.0	26.6	6.98	0.138	10.43
fio026	fio026-b3e115dr	fio026-b3e115drp1_GCAGAAAG_S36_L006_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	78435303	9237042	0.1411	60.4	33.2	6.56	0.128	9.20
fio026	fio026-b3e112dr	fio026-b3e112drp1_TTCGCAA_S33_L006_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	79398714	10315514	0.1438	59.6	29.2	4.96	0.143	10.47
fio026	fio026-b3e112dr	fio026-b3e112drp2_CTCGCGC_S34_L006_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	84146429	10526428	0.1380	59.5	29.0	4.97	0.145	11.25
fio026	fio026-b3e114dr	fio026-b3e114drp2_CCAGCGG_S37_L006_ARmerged,181102_ST-E00274_0258_AHTV7TCCXY,all	11/2/2018	88142144	10003242	0.1212	62.2	27.2	4.04	0.146	10.61
fio026	fio026-b3e113dr	fio026-b3e113drp1_AATGATG_S30_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	62808715	4583008	0.1769	57.0	70.3	2.67	0.054	4.15
fio026	fio026-b3e113dr	fio026-b3e113drp2_AATGATG_S30_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	62639156	4532614	0.1736	57.1	69.9	2.68	0.054	3.99
fio026	fio026-b3e113dr	fio026-b3e113drp2_GTCCGGC_S4_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	68599257	4997761	0.1795	57.0	71.0	2.62	0.059	4.33
fio026	fio026-b3e113dr	fio026-b3e113drp2_GTCCGGC_S4_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	68498849	5029021	0.1804	56.9	70.9	2.64	0.059	4.44
fio026	fio026-b1e112dr	fio026-b1e112drp1_AATACCT_S25_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	49364143	8833329	0.0229	65.1	36.1	5.93	0.014	0.96
fio026	fio026-b1e115dr	fio026-b1e115drp1_AGCCCTG_S8_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	66872198	1321692	0.0260	64.9	36.7	7.35	0.020	1.58
fio026	fio026-b1e115dr	fio026-b1e115drp2_AGCCCTG_S8_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	66173190	1346793	0.0264	64.6	35.4	7.58	0.020	1.50
fio026	fio026-b1e115dr	fio026-b1e115drp2_GTACTAT_S14_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	75172641	1587039	0.0269	65.1	34.0	7.78	0.024	1.89
fio026	fio026-b1e112dr	fio026-b1e112drp2_CGCGCTA_S31_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	60864223	1034038	0.0224	65.0	38.5	5.82	0.016	1.26
fio026	fio026-b1e114dr	fio026-b1e114drp2_GCCGCTT_S11_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	78116775	1378533	0.0218	65.9	33.2	6.69	0.022	1.38
fio026	fio026-b1e114dr	fio026-b1e114drp2_GCCGCTT_S11_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	78216312	1406840	0.0219	65.8	31.9	6.85	0.022	1.57
fio026	fio026-b1e113dr	fio026-b1e113drp1_GTACCGG_S28_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	54256988	937649	0.0219	66.7	36.0	5.44	0.015	1.19
fio026	fio026-b1e112dr	fio026-b1e112drp2_CGCGCTA_S31_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	61251483	1036011	0.0222	65.6	38.2	5.74	0.016	1.16
fio026	fio026-b1e113dr	fio026-b1e113drp2_GACGGG_S2_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	61866964	1127346	0.0227	66.2	34.4	5.81	0.018	1.34
fio026	fio026-b1e115dr	fio026-b1e115drp2_GTACTAT_S14_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	75281543	1613603	0.0269	65.0	32.7	7.90	0.025	1.91
fio026	fio026-b1e114dr	fio026-b1e114drp1_GACGATT_S5_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	62537517	1046853	0.0220	65.5	37.7	6.13	0.016	0.98
fio026	fio026-b1e114dr	fio026-b1e114drp1_GACGATT_S5_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	61710779	1066909	0.0222	65.1	36.2	6.33	0.016	1.30
fio026	fio026-b1e112dr	fio026-b1e112drp1_AATACCT_S25_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	49167853	875822	0.0226	65.7	35.7	5.79	0.014	0.96
fio026	fio026-b1e113dr	fio026-b1e113drp2_GACGGG_S2_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	61444045	1145084	0.0229	65.8	33.4	5.98	0.018	1.23
fio026	fio026-b3e115dr	fio026-b3e115drp1_GCAGAAAG_S10_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	58850064	6398033	0.1388	60.8	38.1	6.03	0.088	6.19
fio026	fio026-b3e112dr	fio026-b3e112drp1_TTCGCAA_S27_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	61020282	6828656	0.1417	59.6	39.7	4.24	0.092	6.99
fio026	fio026-b3e112dr	fio026-b3e112drp2_CTCGCGC_S1_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	75504434	8382066	0.1371	59.6	38.0	4.34	0.113	8.50
fio026	fio026-b3e112dr	fio026-b3e112drp2_CTCGCGC_S1_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	75715718	8219448	0.1356	59.7	38.8	4.26	0.111	8.63
fio026	fio026-b3e115dr	fio026-b3e115drp2_GCGAGCC_S16_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	63767670	7138198	0.1322	61.3	32.1	6.50	0.101	7.01
fio026	fio026-b3e112dr	fio026-b3e112drp1_TTCGCAA_S27_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	60948767	6790896	0.1401	60.0	39.2	4.21	0.092	6.73
fio026	fio026-b1e113dr	fio026-b1e113drp1_GTACCGG_S28_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	54076639	938060	0.0221	66.2	36.4	5.51	0.015	0.99
fio026	fio026-b3e114dr	fio026-b3e114drp2_CCAGCGG_S13_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	67279842	7125751	0.1190	62.5	32.0	3.76	0.103	7.51
fio026	fio026-b3e115dr	fio026-b3e115drp2_GCGAGCC_S16_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	63475138	6999184	0.1320	61.3	33.2	6.38	0.099	7.19
fio026	fio026-b3e114dr	fio026-b3e114drp2_CCAGCGG_S13_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	67327834	6993394	0.1188	62.6	32.9	3.70	0.101	7.51
fio026	fio026-b3e114dr	fio026-b3e114drp1_GGCATAG_S7_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	54955191	5511376	0.1198	62.3	36.4	3.51	0.079	5.73
fio026	fio026-b3e115dr	fio026-b3e115drp1_GCAGAAAG_S10_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	59963865	6583244	0.1394	60.6	37.7	6.09	0.091	6.80
fio026	fio026-b3e114dr	fio026-b3e114drp1_GGCATAG_S7_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	55740952	5425517	0.1183	62.5	37.6	3.38	0.078	5.51
fio026	fio026-b2e113dr	fio026-b2e113drp1_GGTCAAG_S29_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	57981481	2959594	0.0632	59.8	37.4	4.28	0.041	2.82
fio026	fio026-b2e114dr	fio026-b2e114drp1_TAGGCGG_S6_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	56758693	2901638	0.0615	60.0	34.8	4.87	0.040	2.78
fio026	fio026-b2e112dr	fio026-b2e112drp2_GGAGTCC_S32_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	75636499	3792306	0.0641	59.4	39.1	4.51	0.052	3.56
fio026	fio026-b2e115dr	fio026-b2e115drp1_CCAACCT_S9_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	59979531	3450588	0.0720	59.4	34.1	7.72	0.048	3.12
fio026	fio026-b2e112dr	fio026-b2e112drp1_GCAATGC_S26_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	80254305	4180407	0.0654	59.6	37.7	4.58	0.057	3.77
fio026	fio026-b2e114dr	fio026-b2e114drp2_AACGACC_S12_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	68622626	3686672	0.0617	60.2	31.1	5.18	0.052	3.74
fio026	fio026-b2e114dr	fio026-b2e114drp1_TAGGCGG_S6_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	57125080	2841945	0.0606	60.2	35.7	4.74	0.040	2.72
fio026	fio026-b2e112dr	fio026-b2e112drp2_GGAGTCC_S32_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	75980106	3769559	0.0630	59.8	38.7	4.46	0.052	3.46
fio026	fio026-b2e115dr	fio026-b2e115drp2_GGAGATC_S15_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	70452255	4218251	0.0728	59.6	31.9	7.89	0.059	3.86
fio026	fio026-b2e112dr	fio026-b2e112drp1_CGAAATGC_S26_L008_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	80040693	4131145	0.0644	60.0	37.3	4.52	0.057	3.93
fio026	fio026-b2e115dr	fio026-b2e115drp1_CCAACCT_S9_L004_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	60229001	3516286	0.0719	59.4	32.9	7.83	0.049	3.23
fio026	fio026-b2e114dr	fio026-b2e114drp2_AACGACC_S12_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	68355814	3617126	0.0617	60.3	32.2	5.12	0.051	3.50
fio026	fio026-b2e115dr	fio026-b2e115drp2_GGAGATC_S15_L003_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	70171418	4143920	0.0728	59.7	33.0	7.78	0.058	3.89
fio026	fio026-b2e113dr	fio026-b2e113drp2_AGAAGAC_S3_L002_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	80690883	4135843	0.0644	59.5	38.4	4.32	0.056	3.83
fio026	fio026-b2e113dr	fio026-b2e113drp1_GGTCAAG_S29_L007_ARmerged,180907_ST-E00215_0288_AHNGTGCCXY,all	9/7/2018	57945010	2980366	0.0641	59.5	37.8	4.34	0.041	2.71
fio026	fio026-b2e113dr	fio026-b2e113drp2_AGAAGAC_S3_L001_ARmerged,180907_ST-E00215_0289_BHNGMNCXY,all	9/7/2018	80194367	4217808	0.0652	59.2	37.4	4.42	0.057	3.95
fio026	fio026-b3e211p1	fio026-b3e211p1_ACGTATG_S23_L007_ARmerged,180731_ST-E00215_0280_AHLFGLCCXY,all	7/31/2018	27683664	3693747	0.1439	74.6	29.3	0.92	0.066	4.55
fio026	fio026-b1e111p1	fio026-b1e111p1_GCAATGC_S24_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	33375770	2073406	0.0778	75.7	40.2	1.07	0.037	3.11
fio026	fio026-b3e111p1	fio026-b3e111p1_CTCGCGC_S26_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	33142506	7311289	0.2333	67.1	30.5	1.72	0.112	8.08
fio026	fio026-b2e111p1	fio026-b2e111p1_CTCGCGC_S25_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	33806757	5794595	0.1808	64.8	30.8	1.72	0.085	5.67
fio027	fio027-b1e112p1	fio027-b1e112p1_TTGGATC_S37_L004_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	44931268	264046	0.0092	55.1	28.9	26.34	0.003	0.34
fio027	fio027-b1e114p2	fio027-b1e114p2_AACCTGC_S43_L004_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	41439455	2237779	0.0101	55.7	28.4	34.11	0.003	0.27
fio027	fio027-b1e115p2	fio027-b1e115p2_CCAACCT_S44_L004_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	44384631	275602	0.0110	55.4	31.8	29.15	0.003	0.26
fio027	fio027-b1e112p2	fio027-b1e112p2_CCGATTG_S38_L004_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	54044136	337400	0.0094	54.8	29.1	24.23	0.004	0.38
fio027	fio027-b1e114p1	fio027-b1e114p1_CGCGCAG_S40_L004_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	52063007	263461	0.0101	54.7	29.0	36.16	0.003	0.35
fio027	fio027-b1e113p2	fio027-b1e113p2_AGCCCTG_S42_L004_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	59020587	339606	0.0102	57.0	32.9	27.85	0.004	0.44
fio027	fio027-b1e115p1	fio027-b1e115p1_CGACGGT_S									

flo029	flo029-b3e113dr	flo029-b3e113drp1_S22_L004_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	43450608	393289	0.0138	59.5	37.0	14.91	0.005	0.30
flo029	flo029-b3e114dr	flo029-b3e114drp2_S27_L004_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41329462	559767	0.0190	55.4	38.4	11.07	0.007	0.47
flo029	flo029-b1e112dr	flo029-b1e112drp2_S9_L003_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	55424186	750703	0.0186	52.5	34.5	12.07	0.009	0.30
flo029	flo029-b2e113dr	flo029-b2e113drp1_S8_L003_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	45286068	1335458	0.0379	53.2	35.1	7.88	0.017	0.76
flo029	flo029-b2e114dr	flo029-b2e114drp2_S18_L004_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	54825706	1407445	0.0354	53.4	41.0	6.68	0.017	0.80
flo029	flo029-b3e114dr	flo029-b3e114drp1_S23_L004_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41144209	558410	0.0191	55.5	38.9	10.89	0.007	0.52
flo029	flo029-b3e211p1	flo029-b3e211p1_AGAAGAC_S28_L007_ARmerged,180731_ST-E00215_0280_AHLFGLCCXY,all	7/31/2018	29120013	3126446	0.1109	65.8	24.4	1.49	0.050	1.78
flo029	flo029-b1e211p1	flo029-b1e211p1_AAGCTAA_S26_L007_ARmerged,180731_ST-E00215_0280_AHLFGLCCXY,all	7/31/2018	38353888	532251	0.0147	65.7	24.4	3.03	0.009	0.36
flo029	flo029-b2e211p1	flo029-b2e211p1_GACGGCG_S27_L007_ARmerged,180731_ST-E00215_0280_AHLFGLCCXY,all	7/31/2018	33522213	1592720	0.0477	60.0	22.4	2.58	0.023	1.11
flo029	flo029-b1e111p1	flo029-b1e111p1_GTCGGCG_S32_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	35625105	1136192	0.0336	59.7	25.5	3.18	0.016	0.72
flo029	flo029-b2e111p1	flo029-b2e111p1_TCAGCTT_S33_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	41598057	3852452	0.1010	57.2	28.9	3.66	0.052	2.37
flo029	flo029-b3e111p1	flo029-b3e111p1_AGAGCGC_S34_L008_ARmerged,180731_ST-E00215_0280_AHLFGLCCXY,all	3/9/2018	37465817	7479269	0.2092	60.1	26.4	2.54	0.107	4.48
flo030	flo030-b2e115dr	flo030-b2e115drp2_ATGCCGC_S34_L002_ARmerged,190604_A00605_0043_BHV7JYDRXX,all	6/4/2019	24227226	773254	0.0324	56.1	16.4	10.77	0.010	0.95
flo030	flo030-b2e113dr	flo030-b2e113drp1_TTGAAGT_S34_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	39155836	353253	0.0121	60.1	33.3	11.42	0.005	0.38
flo030	flo030-b2e113dr	flo030-b2e113drp2_AGATAGG_S46_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41361819	369937	0.0122	60.2	34.7	11.05	0.005	0.41
flo030	flo030-b1e112dr	flo030-b1e112drp2_GATCTCG_S41_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	37215735	3072889	0.1056	55.0	35.8	6.91	0.039	1.53
flo030	flo030-b3e113dr	flo030-b3e113drp1_TCATGGT_S52_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41869917	375301	0.0125	60.3	34.7	12.30	0.005	0.37
flo030	flo030-b2e114dr	flo030-b2e114drp1_CAGTACT_S49_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	36862583	523708	0.0193	55.4	36.9	10.75	0.007	0.42
flo030	flo030-b3e112dr	flo030-b3e112drp1_CGACCTG_S37_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	40310817	3290545	0.1001	54.8	34.3	5.98	0.042	1.64
flo030	flo030-b3e114dr	flo030-b3e114drp2_CATCCGC_S51_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	36989284	591153	0.0200	56.3	34.2	8.58	0.008	0.61
flo030	flo030-b1e113dr	flo030-b1e113drp1_GCTCGAA_S30_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41055420	386272	0.0135	59.4	33.0	15.40	0.005	0.37
flo030	flo030-b1e113dr	flo030-b1e113drp2_CAAATG_S42_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	40444524	368708	0.0137	59.5	36.4	14.72	0.005	0.38
flo030	flo030-b1e112dr	flo030-b1e112drp1_CTCGATG_S29_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	40890161	3373554	0.1046	54.9	35.0	7.21	0.043	1.77
flo030	flo030-b3e113dr	flo030-b3e113drp2_AATAGTA_S50_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	46914925	415328	0.0125	60.1	35.6	12.24	0.006	0.47
flo030	flo030-b2e114dr	flo030-b2e114drp2_CCGATTG_S47_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	38103223	551590	0.0194	55.3	35.6	11.13	0.007	0.47
flo030	flo030-b3e114dr	flo030-b3e114drp1_AGGTACC_S39_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	40654823	668969	0.0200	56.3	31.6	8.91	0.009	0.60
flo030	flo030-b2e112dr	flo030-b2e112drp2_CAAATAC_S45_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	43011788	3389779	0.1037	54.6	38.3	6.54	0.043	1.69
flo030	flo030-b1e115dr	flo030-b1e115drp1_CCGGTAC_S32_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	39038785	1196996	0.0378	56.9	35.7	6.03	0.016	1.22
flo030	flo030-b2e112dr	flo030-b2e112drp1_AACTCCG_S33_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	44718368	3707218	0.1033	54.5	34.2	7.04	0.047	1.93
flo030	flo030-b1e114dr	flo030-b1e114drp2_TGACGTC_S43_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41166350	656215	0.0221	55.6	36.9	11.67	0.008	0.66
flo030	flo030-b3e115dr	flo030-b3e115drp1_TGCGTCC_S40_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	38209457	1301619	0.0404	57.0	34.0	5.33	0.017	1.38
flo030	flo030-b3e112dr	flo030-b3e112drp2_ACTATCA_S35_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	44074881	3712196	0.1043	54.7	34.8	6.10	0.047	2.04
flo030	flo030-b3e115dr	flo030-b3e115drp2_TAAATGCG_S38_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	35116219	1220540	0.0407	57.0	33.0	5.42	0.016	1.22
flo030	flo030-b2e115dr	flo030-b2e115drp2_ATGCCGC_S48_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	43879702	1193645	0.0338	56.2	34.4	8.11	0.015	1.25
flo030	flo030-b1e115dr	flo030-b1e115drp2_GATGCCA_S44_L006_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41915961	1275668	0.0384	57.0	37.3	5.90	0.017	1.38
flo030	flo030-b2e115dr	flo030-b2e115drp1_TTGGATC_S36_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	41163919	1133707	0.0339	56.2	33.6	8.25	0.015	1.29
flo030	flo030-b1e114dr	flo030-b1e114drp1_ACCAACT_S31_L005_ARmerged,180907_ST-E00279_0221_AHNGV3CCXY,all	9/7/2018	50257308	803835	0.0217	55.7	35.5	11.77	0.010	0.82
flo030	flo030-b1e111p1	flo030-b1e111p1_GCCTACG_S35_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	35979756	747711	0.0225	63.8	26.2	5.02	0.011	0.81
flo030	flo030-b2e111p1	flo030-b2e111p1_TAAATCAT_S36_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	37641169	1805555	0.0493	60.0	29.3	3.16	0.024	2.03
flo030	flo030-b3e111p1	flo030-b3e111p1_AACCTGC_S37_L008_ARmerged,180309_ST-E00279_0198_BHH7NKCCXY,all	3/9/2018	33462148	2548841	0.0780	61.6	28.9	2.95	0.035	2.83
flo031	flo031-b3e211dr	flo031-b3e211drp1_ACTGGAC_S26_L002_ARmerged-N,190418_ST-E00215_0353_AHYCL3CCXY,all	4/18/2019	39437900	739113	0.0255	66.9	37.3	8.41	0.012	0.74
flo031	flo031-b1e111p1	flo031-b1e111p1_TCGCAGG_S19_L007_ARmerged,180302_ST-E00215_0264_BHH7JKCCXY,all	3/2/2018	23725265	851162	0.0384	73.4	23.2	3.76	0.016	1.14
flo031	flo031-b2e111p1	flo031-b2e111p1_CTCTGCA_S20_L007_ARmerged,180302_ST-E00215_0264_BHH7JKCCXY,all	3/2/2018	24798068	1916175	0.0801	67.1	23.9	3.78	0.031	1.86
flo031	flo031-b3e111p1	flo031-b3e111p1_CCTAGGT_S21_L007_ARmerged,180302_ST-E00215_0264_BHH7JKCCXY,all	3/2/2018	25308318	3456691	0.1373	64.8	24.7	3.30	0.052	3.00
flo032	flo032-b1e115p2	flo032-b1e115p2_GGCATAG_S8_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	31936223	219196	0.0072	61.6	24.7	3.19	0.003	0.49
flo032	flo032-b2e113p2	flo032-b2e113p2_TTCAACC_S9_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	45676556	479125	0.0113	64.0	27.7	2.01	0.007	1.92
flo032	flo032-b2e115p2	flo032-b2e115p2_AGAATTA_S11_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	54693615	521673	0.0114	62.3	34.6	3.03	0.008	1.96
flo032	flo032-b1e114p2	flo032-b1e114p2_TAGGCCG_S7_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	63501290	485252	0.0082	61.1	27.3	2.77	0.007	0.99
flo032	flo032-b1e113p2	flo032-b1e113p2_GACGATT_S6_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	75499120	553570	0.0084	61.9	32.7	2.45	0.008	1.17
flo032	flo032-b2e114p1	flo032-b2e114p1_AACCAAG_S4_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	70238463	690148	0.0115	62.0	32.6	3.88	0.010	2.52
flo032	flo032-b2e114p2	flo032-b2e114p2_GCAAGAA_S10_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	74042607	714606	0.0128	61.9	42.1	2.85	0.010	2.75
flo032	flo032-b2e115p1	flo032-b2e115p1_CGGCGTA_S5_L002_ARmerged,190328_ST-E00215_0345_AHYHTCCXY,all	3/28/2019	91270580	781335	0.0106	61.5	37.3	3.70	0.011	2.95
flo032	flo032-b1e112p1	flo032-b1e112p1_ATGGAGA_S45_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	41779893	327502	0.0086	58.8	25.2	6.64	0.005	0.65
flo032	flo032-b1e112p2	flo032-b1e112p2_GCATGGG_S47_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	55825288	405982	0.0080	60.1	26.1	5.39	0.006	0.80
flo032	flo032-b1e115p1	flo032-b1e115p1_AGCAGGT_S51_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	60333309	392945	0.0071	60.5	25.6	5.90	0.006	0.87
flo032	flo032-b1e113p1	flo032-b1e113p1_AAGTCTT_S49_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	62031854	458230	0.0082	60.5	28.0	4.72	0.007	0.90
flo032	flo032-b2e112p1	flo032-b2e112p1_TTGAAGT_S46_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	54206816	520570	0.0115	61.1	30.4	7.09	0.008	1.98
flo032	flo032-b2e113p1	flo032-b2e113p1_GTACCGG_S52_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	62676356	630021	0.0110	62.0	27.4	4.03	0.009	2.59
flo032	flo032-b1e114p1	flo032-b1e114p1_ACTGGAC_S50_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	65639526	495093	0.0083	59.5	26.4	5.55	0.007	0.94
flo032	flo032-b2e112p2	flo032-b2e112p2_CAAATAC_S48_L005_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	93161753	851758	0.0116	61.4	36.2	5.63	0.012	3.58
flo032	flo032-b3e112p1	flo032-b3e112p1_AACGACC_S26_L006_ARmerged-N,190208_ST-E00280_0238_BHWNM3CCXY,all	2/8/2019	22124543	7896	0.0005	80.7	28.2	9.28	0.000	0.02
flo032	flo032-b3e113p1	flo032-b3e113p1_ATGGAGA_S19_L006_ARmerged-N,190208_ST-E00280_0238_BHWNM3CCXY,all	2/8/2019	27245604	25016	0.0061	65.4	29.0	59.89	0.000	0.14
flo032	flo032-b2e111p1	flo032-b2e111p1_GCAAGAT_S23_L007_ARmerged,180302_ST-E00215_0264_BHH7JKCCXY,all	3/2/2018	29644205	345581	0.0142	62.0	29.8	8.53	0.005	1.20
flo032	flo032-b3e111p1	flo032-b3e111p1_ATGGAGA_S24_L007_ARmerged,180302_ST-E00215_0264_BHH7JKCCXY,all	3/2/2018	29255913	53490	0.0039	64.8	19.0	46.34	0.001	0.16
flo032	flo032-b1e111p1	flo032-b1e111p1_GGATCAA_S22_L007_ARmerged,180302_ST-E00215_0264_BHH7JKCCXY,all	3/2/2018	29481601	259586	0.0104	60.2	26.4	10.11	0.004	0.34
flo033	flo033-b1e111p1	flo033-b1e111p1_CTCGATG_S1_L001_ARmerged,190604_A00605_0043_BHV7JYDRXX,all	6/4/2019	22594967	470615	0.0207	65.7	12.9	11.46	0.007	1.41
flo033	flo033-b1e112p1	flo033-b1e112p1_CTCGATG_S57_L006_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all	3/15/2019	18541859	272856	0.0168	68.3	29.0	6.23	0.004	0.82
flo033	flo033-b1e114p2	flo033-b1e114p2_TTAATCTC_S68_L006_ARmerged-N,190315_ST-E00215_0344_BHYHTKCCXY,all									