

IFE/KR/F-2017/100



DATA REPORT  
ISOTOPE ANALYSIS  
(IFE REF: 2017-176)



Institute for Energy Technology



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Summary $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ isotope analysis were performed on 372 biota samples.		Distribution Electronic: Johansen I. Nilsen B.  Paper:  File (1 copy) Library (1 copy)	
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## 1 Introduction

372 samples were received and analysed for  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ .

## 2 Analytical methods

### Carbon/Nitrogen

Approximately 1.0 mg of each sample was transferred into a Sn capsule. The sample capsules were combusted in presence of  $\text{O}_2$  and  $\text{Cr}_2\text{O}_3$  at 1700 °C in a Eurovector EA3028 elemental analyser. Reduction of  $\text{NO}_x$  to  $\text{N}_2$  was done in the presence of Cu at 650 °C.  $\text{H}_2\text{O}$  was removed in a  $\text{Mg}(\text{ClO}_4)_2$  chemical trap before separation of  $\text{N}_2$  and  $\text{CO}_2$  on a 2 m Poraplot Q GC column.  $\text{N}_2$  and  $\text{CO}_2$  were transferred directly to a Horizon Isotope Ratio Mass Spectrometer (IRMS) from Nu-Instruments for determination of  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ . %C, %N and the C/N ratio were quantified on the basis of comparison of the chromatographic peak areas to known standards.

## 3 Accuracy and precision

### Carbon/Nitrogen

The accuracy and precision of  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  analyses have been quantified by replicate analysis of an internal standard (IFE trout) and of international certified reference materials. The IFE trout standard was prepared by Soxhlet extraction with  $\text{CH}_2\text{Cl}_2$ : 7 %  $\text{CH}_3\text{OH}$  for approximately 2 hours, cleansed with 2N HCl and rinsed with distilled water to a neutral pH. The  $\delta^{15}\text{N}$  composition of IFE trout has been calibrated against IAEA-N-1 and IAEA-N-2 standards. The  $\delta^{13}\text{C}$  composition of IFE trout has been calibrated against the USGS-24 standard. The average value for IFE trout is:

$$\delta^{15}\text{N}_{\text{AIR}}: 11.60\text{‰} \pm 0.20 \text{ (1sigma)} \quad \delta^{13}\text{C}_{\text{VPDB}}: -20.22\text{‰} \pm 0.19 \text{ (1sigma)}$$

Average results with one standard deviation for 9 analyses of the IFE trout standard analyzed together with the samples:

$$\delta^{15}\text{N}_{\text{AIR}}: 11.63\text{‰} \pm 0.35 \text{ (1sigma)} \quad \delta^{13}\text{C}_{\text{VPDB}}: -20.21\text{‰} \pm 0.23 \text{ (1sigma)}$$

## 4 Results

Table 1: Results of  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  isotope analysis

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2013-1257/1	Kveite	2017-176-001	-22,97	14,68	55,07	11,08	4,97	
2013-1258/1	Kveite	2017-176-002	-20,39	12,92	51,52	14,37	3,59	
2013-1259/1	Kveite	2017-176-003	-19,89	14,94	53,34	13,17	4,05	
2013-1261/1	Kveite	2017-176-004	-21,05	15,17	53,82	13,29	4,05	
2013-1262/1	Kveite	2017-176-005	-21,07	13,91	52,93	13,31	3,98	
2013-1263/1	Kveite	2017-176-006	-21,46	13,69	54,84	12,64	4,34	
2013-1264/1	Kveite	2017-176-007	-20,75	13,40	53,34	13,30	4,01	
2013-1265/1	Kveite	2017-176-008	-21,08	15,29	55,26	12,55	4,40	
2013-1266/1	Kveite	2017-176-009	-21,74	14,84	53,58	11,43	4,69	
2013-1267/1	Kveite	2017-176-010	-21,06	13,23	52,39	13,51	3,88	
2013-1268/1	Kveite	2017-176-011	-20,33	15,77	50,34	13,67	3,68	
2013-1269/1	Kveite	2017-176-012	-21,48	14,11	54,56	12,72	4,29	
2013-1274/1	Kveite	2017-176-013	-20,97	13,32	50,27	13,20	3,81	
2013-1275/1	Kveite	2017-176-014	-20,07	13,61	50,02	14,54	3,44	
2013-1280/1	Kveite	2017-176-015	-20,60	13,25	54,22	12,60	4,30	
2013-1282/1	Kveite	2017-176-016	-20,71	13,30	51,25	14,73	3,48	
2013-1283/1	Kveite	2017-176-017	-20,84	12,27	51,91	13,24	3,92	
2013-1284/1	Kveite	2017-176-018	-23,10	12,93	54,65	11,12	4,91	
2013-1286/1	Kveite	2017-176-019	-18,66	14,16	48,84	15,10	3,23	
2013-1287/1	Kveite	2017-176-020	-19,65	13,90	50,86	13,68	3,72	
2013-1289/1	Kveite	2017-176-021	-19,28	14,12	49,12	14,79	3,32	
2013-1290/1	Kveite	2017-176-022	-20,58	14,22	51,96	13,24	3,92	
2013-1293/1	Kveite	2017-176-023	-20,22	15,93	53,52	13,05	4,10	
2013-1294/1	Kveite	2017-176-024	-21,13	14,22	51,76	12,64	4,09	
2013-1295/1	Kveite	2017-176-025	-18,16	14,95	51,00	14,86	3,43	
2013-1296/1	Kveite	2017-176-026	-21,30	13,99	53,24	11,79	4,52	
2013-1297/1	Kveite	2017-176-027	-22,14	13,92	58,42	10,64	5,49	
2013-1298/1	Kveite	2017-176-028	-20,58	14,12	50,94	13,98	3,64	
2013-1299/1	Kveite	2017-176-029	-19,49	13,44	50,66	13,66	3,71	
2013-1301/1	Kveite	2017-176-030	-20,59	14,48	50,39	13,12	3,84	
2013-1302/1	Kveite	2017-176-031	-21,91	15,01	53,72	10,99	4,89	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}C_{VPDB}$	$\delta^{15}N_{AIR}$	W% C	W%N	C/N Ratio	Kommentar
2013-1303/1	Kveite	2017-176-032	-19,06	16,45	52,37	12,69	4,13	
2013-1322/1	Kveite	2017-176-033	-21,44	13,66	52,61	12,44	4,23	
2013-1323/1	Kveite	2017-176-034	-19,45	14,61	47,06	13,91	3,38	
2013-1324/1	Kveite	2017-176-035	-19,53	15,60	51,51	12,56	4,10	
2013-1326/1	Kveite	2017-176-036	-19,69	14,29	50,68	13,45	3,77	
2013-1327/1	Kveite	2017-176-037	-21,07	14,05	52,34	13,14	3,98	
2013-1328/1	Kveite	2017-176-038	-19,23	14,35	51,12	13,43	3,81	
2013-1524/1	Kveite	2017-176-039	-18,99	14,55	49,00	14,60	3,36	
2013-1527/1	Kveite	2017-176-040	-20,80	14,12	52,02	13,24	3,93	
2013-1532/1	Kveite	2017-176-041	-18,75	14,49	49,12	14,34	3,42	
2013-1537/1	Kveite	2017-176-042	-20,54	15,00	53,30	11,86	4,49	
2013-1538/1	Kveite	2017-176-043	-21,43	13,96	54,96	11,69	4,70	
2013-1539/1	Kveite	2017-176-044	-18,87	13,30	47,72	14,81	3,22	
2013-1554/1	Kveite	2017-176-045	-21,20	14,69	55,19	11,26	4,90	
2013-1555/1	Kveite	2017-176-046	-20,96	15,05	52,27	11,66	4,48	
2013-1556/1	Kveite	2017-176-047	-21,09	14,68	54,44	12,04	4,52	
2013-1557/1	Kveite	2017-176-048	-22,77	14,50	56,70	10,01	5,66	verifisert 2x
2013-1707/1	Kveite	2017-176-049	-20,47	14,61	52,39	12,75	4,11	
2013-1710/1	Kveite	2017-176-050	-19,03	13,26	43,62	14,09	3,10	
2013-1719/1	Kveite	2017-176-051	-20,32	13,05	51,38	13,40	3,83	
2013-1720/1	Kveite	2017-176-052	-18,54	15,07	49,61	12,81	3,87	
2013-1722/1	Kveite	2017-176-053	-20,61	12,66	49,90	12,22	4,08	
2013-1724/1	Kveite	2017-176-054	-18,46	15,37	46,97	14,07	3,34	
2013-1727/1	Kveite	2017-176-055	-19,46	14,46	46,73	12,42	3,76	
2013-1729/1	Kveite	2017-176-056	-20,75	15,01	51,54	11,72	4,40	
2013-1730/1	Kveite	2017-176-057	-20,13	12,71	44,58	13,84	3,22	
2013-1732/1	Kveite	2017-176-058	-23,37	14,11	62,56	6,41	9,76	verifisert 2x
2013-1733/1	Kveite	2017-176-059	-19,07	14,77	48,33	13,62	3,55	
2013-1734/1	Kveite	2017-176-060	-20,47	14,02	50,38	12,77	3,95	
2013-1739/1	Kveite	2017-176-061	-19,50	13,16	46,64	13,91	3,35	
2013-1740/1	Kveite	2017-176-062	-19,76	11,00	47,17	14,50	3,25	
2013-1741/1	Kveite	2017-176-063	-22,53	12,44	54,30	10,74	5,06	
2013-1783/1	Kveite	2017-176-064	-20,40	13,43	57,23	14,49	3,95	
2013-1784/1	Kveite	2017-176-065	-21,09	14,04	60,84	12,88	4,72	
2013-1785/1	Kveite	2017-176-066	-21,76	14,31	59,93	13,11	4,57	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2013-1786/1	Kveite	2017-176-067	-21,76	12,99	55,95	13,31	4,20	
2013-1787/1	Kveite	2017-176-068	-22,85	14,75	63,61	10,43	6,10	
2013-1788/1	Kveite	2017-176-069	-20,85	13,35	56,77	15,20	3,74	
2013-1789/1	Kveite	2017-176-070	-20,63	15,04	55,47	14,08	3,94	
2013-1790/1	Kveite	2017-176-071	-21,71	13,74	57,49	11,88	4,84	
2013-1791/1	Kveite	2017-176-072	-20,22	14,23	53,65	14,03	3,82	
2013-1792/1	Kveite	2017-176-073	-20,94	14,55	55,11	12,82	4,30	
2013-1793/1	Kveite	2017-176-074	-20,18	14,05	54,46	13,61	4,00	
2013-1794/1	Kveite	2017-176-075	-22,86	14,21	55,53	8,59	6,46	
2013-1795/1	Kveite	2017-176-076	-22,59	13,38	63,09	8,67	7,28	verifisert 2x
2013-1950/1	Kveite	2017-176-077	-20,57	15,29	51,25	11,56	4,43	
2013-1951/1	Kveite	2017-176-078	-18,95	14,61	51,36	14,72	3,49	
2014-1069/1	Kveite	2017-176-079	-20,86	13,54	53,43	11,75	4,55	
2014-1070/1	Kveite	2017-176-080	-20,88	14,36	56,95	11,35	5,02	
2014-1354/1	Kveite	2017-176-081	-22,35	13,20	57,46	10,37	5,54	
2014-1355/1	Kveite	2017-176-082	-20,48	12,27	49,62	13,35	3,72	
2014-1356/1	Kveite	2017-176-083	-19,97	12,80	48,84	14,31	3,41	
2014-1357/1	Kveite	2017-176-084	-21,05	12,03	52,83	12,29	4,30	
2014-1358/1	Kveite	2017-176-085	-20,44	12,76	48,40	12,32	3,93	
2014-1359/1	Kveite	2017-176-086	-20,83	12,65	52,75	12,74	4,14	
2014-1363/1	Kveite	2017-176-087	-20,27	12,36	51,42	13,78	3,73	
2014-1365/1	Kveite	2017-176-088	-20,58	12,89	49,91	11,93	4,18	
2014-1366/1	Kveite	2017-176-089	-22,12	12,70	56,02	10,30	5,44	
2014-1367/1	Kveite	2017-176-090	-20,77	12,19	52,85	12,55	4,21	
2014-1368/1	Kveite	2017-176-091	-22,74	12,76	59,44	9,25	6,43	
2014-1370/1	Kveite	2017-176-092	-21,07	12,82	54,28	11,65	4,66	
2014-1372/1	Kveite	2017-176-093	-21,24	13,17	56,33	10,95	5,14	
2014-1373/1	Kveite	2017-176-094	-21,82	13,08	55,95	10,04	5,57	
2014-1374/1	Kveite	2017-176-095	-21,52	12,26	55,43	10,70	5,18	
2014-1376/1	Kveite	2017-176-096	-20,82	12,37	53,43	12,01	4,45	
2014-1377/1	Kveite	2017-176-097	-19,71	12,72	47,96	13,89	3,45	
2014-1378/1	Kveite	2017-176-098	-20,72	11,94	52,74	12,34	4,27	
2014-1380/1	Kveite	2017-176-099	-20,81	13,07	53,07	12,01	4,42	
2014-1381/1	Kveite	2017-176-100	-20,47	12,75	52,21	12,54	4,16	
2014-1382/1	Kveite	2017-176-101	-22,73	12,62	55,97	10,55	5,31	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2014-1383/1	Kveite	2017-176-102	-19,61	14,02	52,90	14,37	3,68	
2014-1384/1	Kveite	2017-176-103	-21,70	12,51	55,28	11,88	4,65	
2014-1385/1	Kveite	2017-176-104	-21,79	12,59	56,76	10,98	5,17	
2014-1386/1	Kveite	2017-176-105	-21,96	12,82	58,22	11,00	5,29	
2014-1387/1	Kveite	2017-176-106	-21,72	12,87	56,34	11,78	4,78	
2014-1388/1	Kveite	2017-176-107	-21,05	12,66	54,56	12,65	4,31	
2014-1389/1	Kveite	2017-176-108	-22,21	13,07	59,65	10,19	5,86	
2014-1390/1	Kveite	2017-176-109	-21,32	12,75	56,58	12,15	4,66	
2014-1391/1	Kveite	2017-176-110	-22,38	12,74	59,54	10,77	5,53	verifisert 2x
2014-1392/1	Kveite	2017-176-111	-19,80	12,67	50,78	14,31	3,55	
2014-1393/1	Kveite	2017-176-112	-19,32	13,58	50,44	13,49	3,74	
2014-1394/1	Kveite	2017-176-113	-21,09	13,12	55,57	12,12	4,58	
2014-1395/1	Kveite	2017-176-114	-22,08	12,76	57,88	10,85	5,33	
2014-1396/1	Kveite	2017-176-115	-21,73	13,04	54,72	11,57	4,73	
2014-1397/1	Kveite	2017-176-116	-21,08	13,04	53,59	11,69	4,58	
2014-1398/1	Kveite	2017-176-117	-21,37	12,73	55,67	11,78	4,73	
2014-1399/1	Kveite	2017-176-118	-21,17	12,89	54,88	12,44	4,41	
2014-1400/1	Kveite	2017-176-119	-23,03	11,93	59,85	9,95	6,01	
2014-1401/1	Kveite	2017-176-120	-21,32	13,26	55,76	11,69	4,77	
2014-1403/1	Kveite	2017-176-121	-21,66	12,77	56,96	11,28	5,05	
2014-1404/1	Kveite	2017-176-122	-22,15	12,97	56,66	9,69	5,85	
2014-1406/1	Kveite	2017-176-123	-21,05	13,37	56,17	11,77	4,77	
2014-1407/1	Kveite	2017-176-124	-20,94	12,76	54,57	12,49	4,37	
2014-1408/1	Kveite	2017-176-125	-21,58	12,45	57,31	11,39	5,03	
2014-1409/1	Kveite	2017-176-126	-22,49	12,79	58,13	10,85	5,36	
2014-1410/1	Kveite	2017-176-127	-19,14	14,19	50,90	13,61	3,74	
2014-1411/1	Kveite	2017-176-128	-21,61	13,58	60,86	10,03	6,07	
2014-1412/1	Kveite	2017-176-129	-20,61	13,89	56,46	12,35	4,57	
2014-1413/1	Kveite	2017-176-130	-22,25	13,52	59,87	9,86	6,08	
2014-1415/1	Kveite	2017-176-131	-22,33	13,68	60,04	9,86	6,09	verifisert 2x
2014-1416/1	Kveite	2017-176-132	-20,62	13,98	55,82	12,21	4,57	
2014-1417/1	Kveite	2017-176-133	-21,30	13,71	55,87	11,58	4,83	
2014-1418/1	Kveite	2017-176-134	-22,00	13,21	58,75	10,52	5,59	
2014-1419/1	Kveite	2017-176-135	-22,41	13,95	59,58	10,08	5,91	
2014-1420/1	Kveite	2017-176-136	-24,12	13,24	65,93	5,15	12,80	verifisert 2x



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2014-1421/1	Kveite	2017-176-137	-21,35	14,15	57,95	10,32	5,61	
2014-1426/1	Kveite	2017-176-138	-20,00	13,77	55,03	11,93	4,61	
2014-1488/1	Kveite	2017-176-139	-22,45	14,01	60,42	10,59	5,71	verifisert 2x
2014-1489/1	Kveite	2017-176-140	-19,41	12,97	49,19	15,36	3,20	
2014-1499/1	Kveite	2017-176-141	-19,64	12,76	48,25	15,57	3,10	
2014-1516/1	Kveite	2017-176-142	-20,16	12,53	48,16	15,18	3,17	
2014-1517/1	Kveite	2017-176-143	-18,99	13,35	50,64	14,50	3,49	verifisert 2x
2014-1518/1	Kveite	2017-176-144	-19,77	13,49	51,37	14,52	3,54	
2014-1519/1	Kveite	2017-176-145	-21,45	12,38	52,42	13,92	3,76	
2014-1520/1	Kveite	2017-176-146	-19,76	13,82	50,78	12,55	4,04	
2014-1521/1	Kveite	2017-176-147	-19,43	14,05	47,92	9,10	5,27	
2014-1522/1	Kveite	2017-176-148	-22,11	14,15	58,48	9,68	6,04	
2014-1695/1	Kveite	2017-176-149	-22,56	13,27	56,66	10,57	5,36	
2014-1697/1	Kveite	2017-176-150	-19,84	14,01	49,64	13,64	3,64	
2014-1698/1	Kveite	2017-176-151	-21,81	14,06	51,36	10,23	5,02	
2014-1699/1	Kveite	2017-176-152	-21,10	13,70	51,95	12,87	4,04	
2014-1702/1	Kveite	2017-176-153	-21,83	13,45	54,30	11,37	4,78	
2014-1703/1	Kveite	2017-176-154	-21,98	13,00	56,66	11,38	4,98	
2014-1704/1	Kveite	2017-176-155	-22,63	13,54	57,06	9,30	6,14	verifisert 2x
2014-1705/1	Kveite	2017-176-156	-24,30	13,43	59,75	7,90	7,56	verifisert 2x
2014-1706/1	Kveite	2017-176-157	-21,76	13,62	55,34	10,63	5,21	
2014-1707/1	Kveite	2017-176-158	-20,12	13,17	51,22	12,83	3,99	
2014-1708/1	Kveite	2017-176-159	-23,00	12,56	58,28	10,24	5,69	
2014-1709/1	Kveite	2017-176-160	-21,99	13,36	51,76	11,09	4,67	
2014-1710/1	Kveite	2017-176-161	-23,77	12,67	63,01	8,76	7,20	verifisert 2x
2014-1711/1	Kveite	2017-176-162	-22,09	12,21	56,15	11,97	4,69	
2014-1712/1	Kveite	2017-176-163	-21,83	12,12	54,78	12,24	4,48	
2014-1713/1	Kveite	2017-176-164	-23,07	14,24	58,77	9,28	6,33	verifisert 2x
2014-1714/1	Kveite	2017-176-165	-20,87	12,24	47,07	13,19	3,57	
2014-1715/1	Kveite	2017-176-166	-21,81	12,37	52,06	11,26	4,62	
2014-1716/1	Kveite	2017-176-167	-22,25	12,18	54,69	11,61	4,71	
2014-1717/1	Kveite	2017-176-168	-21,70	12,61	55,28	12,75	4,34	
2014-1718/1	Kveite	2017-176-169	-21,54	12,58	53,14	12,74	4,17	
2014-1719/1	Kveite	2017-176-170	-20,79	13,26	54,00	12,28	4,40	
2014-1721/1	Kveite	2017-176-171	-21,34	11,80	53,44	12,52	4,27	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2014-1722/1	Kveite	2017-176-172	-21,48	12,34	52,66	11,13	4,73	
2014-1725/1	Kveite	2017-176-173	-20,56	12,90	48,58	12,54	3,87	
2014-1726/1	Kveite	2017-176-174	-21,10	12,86	49,56	11,76	4,21	
2014-1727/1	Kveite	2017-176-175	-21,06	12,76	51,80	12,99	3,99	
2014-1730/1	Kveite	2017-176-176	-22,16	12,21	56,34	11,85	4,76	
2014-1732/1	Kveite	2017-176-177	-19,28	13,62	46,49	13,28	3,50	
2014-1734/1	Kveite	2017-176-178	-22,47	11,63	54,97	10,87	5,06	
2014-1735/1	Kveite	2017-176-179	-23,17	12,68	57,69	9,80	5,89	verifisert 2x
2014-1736/1	Kveite	2017-176-180	-21,28	12,39	52,79	11,37	4,64	
2014-1740/1	Kveite	2017-176-181	-20,93	13,86	54,50	12,32	4,43	
2014-1743/1	Kveite	2017-176-182	-20,10	13,11	51,60	13,55	3,81	
2014-1746/1	Kveite	2017-176-183	-19,61	13,48	50,46	14,82	3,41	
2014-1750/1	Kveite	2017-176-184	-23,35	12,91	60,72	9,22	6,58	verifisert 2x
2014-1751/1	Kveite	2017-176-185	-21,09	13,58	54,63	12,17	4,49	
2014-1803/1	Kveite	2017-176-186	-21,77	13,18	51,53	12,41	4,15	
2014-1804/1	Kveite	2017-176-187	-20,94	12,73	48,89	14,31	3,42	
2014-1805/1	Kveite	2017-176-188	-20,39	13,07	47,08	14,26	3,30	
2014-1806/1	Kveite	2017-176-189	-21,66	13,49	49,43	12,26	4,03	
2014-1807/1	Kveite	2017-176-190	-21,47	14,90	52,18	12,16	4,29	
2014-1808/1	Kveite	2017-176-191	-20,91	14,99	50,36	12,89	3,91	
2014-1809/1	Kveite	2017-176-192	-22,43	14,63	56,62	10,38	5,46	verifisert 2x
2014-1847/1	Kveite	2017-176-193	-22,06	12,75	49,51	12,61	3,93	
2014-1851/1	Kveite	2017-176-194	-19,77	14,87	45,39	13,90	3,26	
2014-1852/1	Kveite	2017-176-195	-21,82	13,51	50,92	12,22	4,17	
2014-1853/1	Kveite	2017-176-196	-21,06	13,95	48,78	13,32	3,66	
2014-1854/1	Kveite	2017-176-197	-22,20	12,82	50,15	12,10	4,14	
2014-1855/1	Kveite	2017-176-198	-20,57	13,46	47,63	14,54	3,28	
2014-1857/1	Kveite	2017-176-199	-21,72	14,55	51,72	11,40	4,54	
2014-1858/1	Kveite	2017-176-200	-20,97	13,47	46,98	14,01	3,35	
2014-1859/1	Kveite	2017-176-201	-19,64	14,32	49,61	14,06	3,53	
2014-1860/1	Kveite	2017-176-202	-19,37	13,83	47,42	14,46	3,28	
2014-1861/1	Kveite	2017-176-203	-21,54	12,84	52,37	12,94	4,05	
2014-1862/1	Kveite	2017-176-204	-20,67	13,79	49,53	13,92	3,56	
2014-1863/1	Kveite	2017-176-205	-20,30	13,82	46,24	13,58	3,40	
2014-1864/1	Kveite	2017-176-206	-21,12	14,02	50,02	13,48	3,71	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2014-1868/1	Kveite	2017-176-207	-20,60	13,03	51,01	13,16	3,88	
2014-1869/1	Kveite	2017-176-208	-22,07	13,83	60,78	13,40	4,54	
2014-1870/1	Kveite	2017-176-209	-21,23	13,41	52,75	11,53	4,57	
2014-1871/1	Kveite	2017-176-210	-19,22	13,86	47,16	14,45	3,26	
2014-1878/1	Kveite	2017-176-211	-19,09	13,73	44,10	12,79	3,45	
2014-1879/1	Kveite	2017-176-212	-19,50	13,41	46,69	14,68	3,18	
2014-1884/1	Kveite	2017-176-213	-20,27	13,89	51,73	12,74	4,06	
2014-1885/1	Kveite	2017-176-214	-20,18	14,41	48,11	14,32	3,36	
2014-1886/1	Kveite	2017-176-215	-19,49	12,38	47,27	14,70	3,21	
2014-1887/1	Kveite	2017-176-216	-19,29	13,17	47,57	14,91	3,19	
2014-1888/1	Kveite	2017-176-217	-20,48	13,01	51,83	12,97	4,00	
2014-1889/1	Kveite	2017-176-218	-19,28	13,36	47,16	14,77	3,19	
2014-1890/1	Kveite	2017-176-219	-19,27	13,66	48,04	14,17	3,39	
2014-1891/1	Kveite	2017-176-220	-20,31	13,61	50,83	13,26	3,83	
2014-1892/1	Kveite	2017-176-221	-22,77	13,91	57,26	9,97	5,74	verifisert 2x
2014-1893/1	Kveite	2017-176-222	-22,70	12,82	57,59	9,34	6,17	verifisert 2x
2014-1894/1	Kveite	2017-176-223	-21,19	13,31	51,15	13,21	3,87	
2014-1895/1	Kveite	2017-176-224	-21,22	14,47	55,94	10,63	5,26	
2014-1896/1	Kveite	2017-176-225	-18,97	14,19	48,47	14,46	3,35	
2014-1897/1	Kveite	2017-176-226	-20,68	13,40	51,16	13,42	3,81	
2014-1899/1	Kveite	2017-176-227	-21,40	13,26	53,17	12,32	4,32	
2014-1900/1	Kveite	2017-176-228	-20,87	13,62	51,04	13,44	3,80	
2014-1901/1	Kveite	2017-176-229	-20,43	14,08	48,76	14,56	3,35	
2014-1902/1	Kveite	2017-176-230	-22,31	14,26	54,42	11,61	4,69	
2014-1903/1	Kveite	2017-176-231	-20,98	14,87	52,61	12,64	4,16	
2014-1904/1	Kveite	2017-176-232	-22,71	14,70	54,54	7,48	7,29	verifisert 2x
2014-1906/1	Kveite	2017-176-233	-21,89	14,63	56,84	10,50	5,41	
2014-1910/1	Kveite	2017-176-234	-20,05	13,59	47,94	14,88	3,22	
2014-1911/1	Kveite	2017-176-235	-22,31	12,28	50,21	13,82	3,63	
2014-1912/1	Kveite	2017-176-236	-22,23	12,51	51,48	13,44	3,83	
2014-1913/1	Kveite	2017-176-237	-20,41	12,90	48,42	14,22	3,40	
2014-1914/1	Kveite	2017-176-238	-19,64	13,52	47,22	15,10	3,13	
2014-1915/1	Kveite	2017-176-239	-23,35	14,83	56,66	10,05	5,64	
2014-1917/1	Kveite	2017-176-240	-21,33	13,89	52,96	12,64	4,19	
2014-2059/1	Kveite	2017-176-241	-18,09	14,74	49,58	14,28	3,47	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2014-2060/1	Kveite	2017-176-242	-18,37	14,99	49,63	14,00	3,55	
2014-2063/1	Kveite	2017-176-243	-20,20	13,74	49,32	14,02	3,52	
2014-2064/1	Kveite	2017-176-244	-20,81	13,21	48,20	14,56	3,31	
2014-2065/1	Kveite	2017-176-245	-20,25	14,63	51,57	12,62	4,09	
2014-2066/1	Kveite	2017-176-246	-20,90	12,89	48,11	14,22	3,38	
2014-2067/1	Kveite	2017-176-247	-19,52	13,03	47,59	15,27	3,12	
2014-2068/1	Kveite	2017-176-248	-19,61	13,01	47,04	14,67	3,21	
2014-806/1	Kveite	2017-176-249	-18,51	14,41	49,83	14,16	3,52	
2014-879/1	Kveite	2017-176-250	-19,75	15,19	51,95	12,64	4,11	
2014-880/1	Kveite	2017-176-251	-18,56	14,25	47,20	14,21	3,32	
2015-117/1	Kveite	2017-176-252	-21,55	13,21	53,72	8,94	6,01	verifisert 2x
2015-1190/1	Kveite	2017-176-253	-21,43	13,50	47,08	11,99	3,93	
2015-1191/1	Kveite	2017-176-254	-19,80	14,04	50,24	13,41	3,75	
2015-1192/1	Kveite	2017-176-255	-20,71	13,85	49,96	13,21	3,78	
2015-1193/1	Kveite	2017-176-256	-22,14	13,33	52,53	12,48	4,21	
2015-1194/1	Kveite	2017-176-257	-22,28	13,51	52,66	11,00	4,79	
2015-1195/1	Kveite	2017-176-258	-21,49	13,88	51,49	11,94	4,31	
2015-1196/1	Kveite	2017-176-259	-21,48	14,00	52,00	12,76	4,07	
2015-1197/1	Kveite	2017-176-260	-20,82	13,94	48,78	12,85	3,80	
2015-1198/1	Kveite	2017-176-261	-22,64	13,32	54,13	10,62	5,10	
2015-1199/1	Kveite	2017-176-262	-22,50	13,18	52,63	10,52	5,00	
2015-1201/1	Kveite	2017-176-263	-21,82	13,30	53,11	11,95	4,44	
2015-1232/1	Kveite	2017-176-264	-17,79	15,93	45,59	14,68	3,10	
2015-1234/1	Kveite	2017-176-265	-19,26	13,53	47,51	14,07	3,38	
2015-1236/1	Kveite	2017-176-266	-20,90	13,90	49,40	13,47	3,67	
2015-1237/1	Kveite	2017-176-267	-19,26	13,57	46,57	14,67	3,18	
2015-1238/1	Kveite	2017-176-268	-20,19	13,93	47,42	14,02	3,38	
2015-1239/1	Kveite	2017-176-269	-20,76	13,48	49,71	13,05	3,81	
2015-1240/1	Kveite	2017-176-270	-20,98	14,21	49,90	12,91	3,87	
2015-1241/1	Kveite	2017-176-271	-20,33	14,97	50,44	13,45	3,75	
2015-1242/1	Kveite	2017-176-272	-20,26	13,69	46,16	14,04	3,29	
2015-1244/1	Kveite	2017-176-273	-21,01	14,83	51,00	12,11	4,21	
2015-1245/1	Kveite	2017-176-274	-26,77	14,86	34,17	13,44	2,54	
2015-1246/1	Kveite	2017-176-275	-19,04	14,63	45,96	14,24	3,23	
2015-1247/1	Kveite	2017-176-276	-20,30	13,96	47,77	13,58	3,52	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2015-1248/1	Kveite	2017-176-277	-20,73	13,49	49,29	13,41	3,68	
2015-1249/1	Kveite	2017-176-278	-21,94	13,83	48,62	9,72	5,00	
2015-1250/1	Kveite	2017-176-279	-19,84	13,51	47,33	14,49	3,27	
2015-1251/1	Kveite	2017-176-280	-21,67	13,41	50,64	12,36	4,10	
2015-1252/1	Kveite	2017-176-281	-20,24	13,04	46,31	14,45	3,21	
2015-1253/1	Kveite	2017-176-282	-18,82	15,26	46,33	14,36	3,23	
2015-1254/1	Kveite	2017-176-283	-19,92	13,79	46,53	14,81	3,14	
2015-1255/1	Kveite	2017-176-284	-19,25	14,85	45,21	13,98	3,23	
2015-1332/1	Kveite	2017-176-285	-19,80	14,21	46,38	14,47	3,21	
2015-1333/1	Kveite	2017-176-286	-22,64	14,69	53,22	9,89	5,38	verifisert 2x
2015-1334/1	Kveite	2017-176-287	-20,25	14,37	47,78	14,09	3,39	
2015-1335/1	Kveite	2017-176-288	-21,26	14,17	50,20	12,98	3,87	
2015-1336/1	Kveite	2017-176-289	-20,35	13,24	45,12	13,55	3,33	
2015-1337/1	Kveite	2017-176-290	-21,86	13,30	52,00	10,56	4,92	
2015-1338/1	Kveite	2017-176-291	-22,21	13,64	54,16	11,77	4,60	
2015-1339/1	Kveite	2017-176-292	-21,14	13,99	48,26	11,63	4,15	
2015-1340/1	Kveite	2017-176-293	-20,51	14,47	41,98	11,76	3,57	
2015-1341/1	Kveite	2017-176-294	-21,07	13,91	51,11	11,91	4,29	
2015-1342/1	Kveite	2017-176-295	-23,09	13,23	51,44	9,81	5,25	verifisert 2x
2015-1343/1	Kveite	2017-176-296	-22,44	13,39	53,81	10,95	4,91	
2015-1344/1	Kveite	2017-176-297	-21,82	13,20	51,20	12,14	4,22	
2015-1345/1	Kveite	2017-176-298	-20,45	13,79	52,62	12,81	4,11	
2015-1346/1	Kveite	2017-176-299	-20,68	13,24	51,61	12,97	3,98	
2015-1347/1	Kveite	2017-176-300	-21,64	12,79	52,08	12,78	4,07	
2015-1348/1	Kveite	2017-176-301	-20,86	13,23	50,40	13,66	3,69	
2015-1349/1	Kveite	2017-176-302	-21,52	13,39	50,36	13,02	3,87	
2015-1350/1	Kveite	2017-176-303	-21,01	13,24	53,02	12,57	4,22	
2015-1351/1	Kveite	2017-176-304	-24,08	13,03	60,83	8,82	6,90	verifisert 2x
2015-1352/1	Kveite	2017-176-305	-20,95	13,51	49,22	12,81	3,84	
2015-1353/1	Kveite	2017-176-306	-21,86	13,52	51,53	12,01	4,29	
2015-1354/1	Kveite	2017-176-307	-21,95	14,07	53,54	12,09	4,43	
2015-1355/1	Kveite	2017-176-308	-20,58	14,46	51,37	12,83	4,00	
2015-1356/1	Kveite	2017-176-309	-22,15	12,72	52,58	12,59	4,18	
2015-1357/1	Kveite	2017-176-310	-23,72	12,68	62,75	12,21	5,14	
2015-1411/1	Kveite	2017-176-311	-21,90	13,35	51,64	12,71	4,06	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2015-1452/1	Kveite	2017-176-312	-21,89	14,18	51,59	11,77	4,38	
2015-1453/1	Kveite	2017-176-313	-21,82	14,31	53,16	11,36	4,68	
2015-1454/1	Kveite	2017-176-314	-20,77	14,63	49,13	12,56	3,91	
2015-1455/1	Kveite	2017-176-315	-19,84	14,79	48,96	12,68	3,86	
2015-1456/1	Kveite	2017-176-316	-21,86	14,57	52,45	11,59	4,53	
2015-1457/1	Kveite	2017-176-317	-20,19	14,85	48,32	13,23	3,65	
2015-1458/1	Kveite	2017-176-318	-19,76	14,46	47,43	13,77	3,44	
2015-1459/1	Kveite	2017-176-319	-20,30	14,72	44,96	11,50	3,91	
2015-1460/1	Kveite	2017-176-320	-19,20	15,00	47,14	13,66	3,45	verifisert 2x
2015-1461/1	Kveite	2017-176-321	-21,46	14,26	50,99	11,39	4,48	
2015-1462/1	Kveite	2017-176-322	-19,11	14,87	45,79	13,78	3,32	verifisert 2x
2015-1463/1	Kveite	2017-176-323	-21,53	13,72	49,98	11,82	4,23	
2015-1464/1	Kveite	2017-176-324	-20,95	13,54	48,91	11,64	4,20	
2015-1465/1	Kveite	2017-176-325	-22,02	13,75	52,56	10,49	5,01	
2015-1466/1	Kveite	2017-176-326	-22,16	14,14	53,89	10,79	5,00	
2015-1467/1	Kveite	2017-176-327	-21,37	13,33	47,32	11,98	3,95	
2015-1468/1	Kveite	2017-176-328	-22,29	13,55	53,38	10,54	5,07	
2015-1469/1	Kveite	2017-176-329	-22,14	14,25	52,57	10,28	5,11	
2015-1470/1	Kveite	2017-176-330	-21,46	13,85	51,74	10,05	5,15	
2015-1471/1	Kveite	2017-176-331	-22,51	13,75	55,94	9,46	5,91	
2015-1472/1	Kveite	2017-176-332	-22,87	13,46	54,19	9,05	5,99	
2015-1473/1	Kveite	2017-176-333	-23,60	13,60	55,74	8,84	6,30	
2015-1474/1	Kveite	2017-176-334	-21,43	13,84	51,61	10,74	4,80	verifisert 2x
2015-1475/1	Kveite	2017-176-335	-23,86	12,92	56,35	8,95	6,30	verifisert 2x
2015-1542/1	Kveite	2017-176-336	-25,10	14,80	62,99	3,63	17,35	verifisert 2x
2015-1844/1	Kveite	2017-176-337	-20,03	14,66	50,52	12,08	4,18	
2015-1846/1	Kveite	2017-176-338	-20,45	14,20	49,10	12,01	4,09	
2015-1847/1	Kveite	2017-176-339	-20,70	13,95	49,86	12,06	4,13	
2015-1850/1	Kveite	2017-176-340	-22,21	13,71	52,36	10,74	4,87	
2015-1851/1	Kveite	2017-176-341	-22,20	13,39	52,31	11,48	4,56	
2015-1853/1	Kveite	2017-176-342	-22,46	13,79	52,97	9,88	5,36	verifisert 2x
2015-1854/1	Kveite	2017-176-343	-23,23	13,87	51,47	8,43	6,11	verifisert 2x
2015-2103/1	Kveite	2017-176-344	-21,13	17,63	53,21	11,06	4,81	
2015-2104/1	Kveite	2017-176-345	-19,66	16,29	48,69	12,96	3,76	
2015-2105/1	Kveite	2017-176-346	-20,59	15,68	49,42	11,82	4,18	

J.nr B-snitt	Art	IFE lab ID	$\delta^{13}\text{C}_{\text{VPDB}}$	$\delta^{15}\text{N}_{\text{AIR}}$	W% C	W%N	C/N Ratio	Kommentar
2015-275/1	Kveite	2017-176-347	-21,19	13,64	49,78	12,11	4,11	
2015-276/1	Kveite	2017-176-348	-21,34	14,12	50,80	11,73	4,33	
2015-277/1	Kveite	2017-176-349	-22,00	14,99	54,54	9,52	5,73	verifisert 2x
2015-278/1	Kveite	2017-176-350	-20,54	14,66	47,22	12,89	3,66	
2015-279/1	Kveite	2017-176-351	-22,21	14,75	52,86	10,47	5,05	
2015-280/1	Kveite	2017-176-352	-20,52	14,57	46,86	13,21	3,55	
2015-283/1	Kveite	2017-176-353	-21,32	15,84	52,35	10,25	5,11	
2015-284/1	Kveite	2017-176-354	-22,16	14,14	51,97	10,59	4,91	
2015-285/1	Kveite	2017-176-355	-19,99	14,37	49,56	14,48	3,42	verifisert 2x
2015-286/1	Kveite	2017-176-356	-22,81	14,30	53,54	10,05	5,32	
2015-293/1	Kveite	2017-176-357	-22,12	13,86	52,25	10,21	5,12	
2015-294/1	Kveite	2017-176-358	-21,43	14,68	50,30	11,02	4,56	
2015-295/1	Kveite	2017-176-359	-21,70	16,67	49,70	11,26	4,42	
2015-296/1	Kveite	2017-176-360	-19,64	13,79	46,03	13,52	3,40	
2015-297/1	Kveite	2017-176-361	-20,56	12,96	48,44	13,40	3,62	
2015-298/1	Kveite	2017-176-362	-19,69	13,95	39,55	13,45	2,94	
2015-501/1	Kveite	2017-176-363	-19,32	15,93	47,18	13,46	3,50	
2015-622/1	Kveite	2017-176-364	-22,20	14,58	52,19	10,26	5,09	
2015-623/1	Kveite	2017-176-365	-21,76	15,75	51,69	10,78	4,79	
2015-625/1	Kveite	2017-176-366	-21,34	14,58	48,18	10,90	4,42	
2015-888/1	Kveite	2017-176-367	-19,77	15,19	47,87	12,25	3,91	
2015-889/1	Kveite	2017-176-368	-20,36	14,00	45,79	13,44	3,41	
2016-1/1	Kveite	2017-176-369	-21,07	15,36	52,58	11,15	4,71	
2016-2/1	Kveite	2017-176-370	-19,10	13,90	47,38	14,59	3,25	
2016-298/1	Kveite	2017-176-371	-20,79	15,34	54,62	11,59	4,71	
2016-299/1	Kveite	2017-176-372	-19,45	14,65	49,16	13,86	3,55	



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