

Test report

61243-004 P02 139

Client: Environmental Protection Agency (EPA)
McCumiskey House
Richview
Clonskeagh Road
Dublin 14
Ireland

Order dated: July 27, 2006

Sample: Cow's milk samples, details see table

Sample-No.	Client's sample characterization	GfA sample No.
A1	Cow milk	6N267001
A2	Cow milk	6N267002
A3	Cow milk	6N267003
A4	Cow milk	6N267004
A5	Cow milk	6N267005
A6	Cow milk	6N267006
A7	Cow milk	6N267007
A8	Cow milk	6N267008
A9	Cow milk	6N267009
A10	Cow milk	6N267010
A11	Cow milk	6N267011
A12	Cow milk	6N267012
A13	Cow milk	6N267013
A14	Cow milk	6N267014
A15	Cow milk	6N267015
A16	Cow milk	6N267016
A18	Cow milk	6N267017
A19	Cow milk	6N267018
A20	Cow milk	6N267019
A21	Cow milk	6N267020
A22	Cow milk	6N267021
A23	Cow milk	6N267022
A24	Cow milk	6N267023
A25	Cow milk	6N267024
B1	Cow milk	6N267025
B2	Cow milk	6N267026

Sample-No.	Client's sample characterization	GfA sample No.
B3	Cow milk	6N267027
B4	Cow milk	6N267028
B5	Cow milk	6N267029
B6	Cow milk	6N267030
B7	Cow milk	6N267031
B8	Cow milk	6N267032
B9	Cow milk	6N267033
B13	Cow milk	6N267034
B14	Cow milk	6N267035
B15	Cow milk	6N267036
B17	Cow milk	6N267037

Testing: Analysis for polychlorinated Dibenzofurans and Dibenzodioxins (PCDF/Ds) and for polychlorinated Biphenyls (PCBs).

Sampling: The samples were sent to GfA by the client.

Sample entry: July 19, 2006

Test method: **Sample preparation**
Freeze drying; Homogenisation; ASE extraction of a representative sample amount by means of Hexane/Dichloromethane/Methanol. Addition of sixteen $^{13}\text{C}_{12}$ -labelled internal Tetra- through OctaCDF/D standards and twelve $^{13}\text{C}_{12}$ -labelled internal PCB standards prior to extraction. Gravimetrical determination of the fat content after evaporation of the solvents.

PCDF/D analysis:

For the PCDF/D analysis the solution was cleaned-up by multi-step liquid/solid chromatography. Prior to the gas chromatographic analysis, two further ^{13}C -labelled PCDF/D standards were added to the PCDF/D fraction for the determination of the recovery of the internal standards.

A capillary gas chromatograph (HRGC, HP 5890) equipped with a DB5 column coupled with a high resolution mass spectrometer (HRMS, VG-Auto-Spec) was used for the PCDF/D analysis. The quantitative determination of native Tetra- through OctaCDF/Ds was achieved via the corresponding $^{13}\text{C}_{12}$ -labelled internal standards (Isotope dilution method; QMA504-171; DIN EN ISO/IEC 17025:2005 accredited method).

The analytical methodology is in compliance with the requirement for the HRGC/HRMS confirmatory analysis of food for PCDD/Fs and PCBs as laid down by the EU directive 2002/69 and its amendment 2004/44 from April 2004.

PCB analysis:

For the PCB analysis the solution was cleaned-up by multi-step liquid/solid chromatography; addition of another ^{13}C -labelled PCB congener to the PCB fraction as recovery standard prior to the GC/MS analysis.

For analysis, a capillary gas chromatograph (HRGC, HP 5890) equipped with a HT5 column coupled with a high resolution mass spectrometer (HRMS, VG-AutoSpec) was used. The quantitative determination of native PCBs was achieved via the corresponding $^{13}\text{C}_{12}$ -labelled internal standards (Isotope dilution method; QMA504-171; DIN EN ISO/IEC 17025:2005 accredited method; however HRMS instead of LRMS).

The analytical methodology is in compliance with the requirement for the HRGC/HRMS confirmatory analysis of food for PCDD/Fs and PCBs as laid down by the EU directive 2002/69 and its amendment 2004/44 from April 2004.

Start of testing: July 27, 2006

End of testing: November 27, 2006

Results: The results of the analysis of the samples are shown in the Tables 01 to 40.

Remarks: None

Tab. 01: Survey on the milk fat related PCDD/F and PCB-TEQ values determined in the background samples A 1 - A 25 of 2006 (upper bound values)

Sample	Dioxins		PCBs	Dioxins and PCBs Total WHO-TEQ incl. LOQ ^a
	I-TEQ incl. LOQ ^a	WHO-TEQ incl. LOQ ^a	WHO-TEQ incl. LOQ ^a	
Unit	pg/g milk fat	pg/g milk fat	pg/g milk fat	pg/g milk fat
A1	0,125	0,148	0,156	0,304
A2	0,150	0,172	0,139	0,311
A3	0,246	0,281	0,236	0,517
A4	0,308	0,342	0,281	0,623
A5	0,110	0,129	0,142	0,271
A6	0,240	0,294	0,178	0,472
A7	0,288	0,342	0,192	0,534
A8	0,221	0,262	0,224	0,486
A9	0,192	0,234	0,167	0,391
A10	0,266	0,319	0,182	0,501
A11	0,214	0,238	0,191	0,429
A12	0,140	0,170	0,148	0,318
A13	0,194	0,216	0,183	0,399
A14	0,107	0,119	0,123	0,242
A15	0,135	0,152	0,204	0,356
A16	0,139	0,176	0,274	0,450
A18	0,157	0,175	0,150	0,325
A19	0,166	0,196	0,218	0,414
A20	0,324	0,369	0,264	0,633
A21	0,641	0,846	0,218	1,06
A22	0,178	0,211	0,162	0,373
A23	0,159	0,189	0,146	0,335
A24	0,239	0,288	0,235	0,523
A25	0,279	0,319	0,167	0,489

[a] : TEQ value calculated by including the not detected congeners also by taking the full value of their limits of quantification (LOQ)

Tab. 02: Survey on the milk fat related PCDD/F and PCB-TEQ values determined in the potential impact samples B 1 - B 17 of 2006 (upper bound values)

Sample	Dioxins		PCBs	Dioxins and PCBs Total WHO-TEQ incl. LOD ^a
	I-TEQ incl. LOD ^a	WHO-TEQ incl. LOD ^a	WHO-TEQ incl. LOD ^a	
Unit	pg/g milk fat	pg/g milk fat	pg/g milk fat	pg/g milk fat
B1	0,283	0,332	0,316	0,648
B2	0,170	0,201	0,220	0,421
B3	0,113	0,134	0,140	0,274
B4	0,139	0,165	0,142	0,307
B5	0,149	0,197	0,129	0,326
B6	0,117	0,141	0,114	0,255
B7	0,177	0,224	0,144	0,368
B8	1,04	1,31	0,517	1,83
B9	0,200	0,226	0,215	0,441
B13	0,319	0,348	0,200	0,548
B14	0,214	0,239	0,205	0,444
B15	0,143	0,163	0,166	0,329
B17	0,195	0,225	0,159	0,384

[a] : TEQ value calculated by including the not detected congeners also by taking the full value of their limits of quantification (LOQ)

Tab. 03: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A1 6N2670.001		A2 6N2670.002	
Fat content [%]	3,7		2,7	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,009	< 0,0004	< 0,04	< 0,001
12378-PentaCDF	< 0,01	< 0,0004	< 0,02	< 0,0006
23478-PentaCDF	0,13	0,005	0,14	0,004
123478-HexaCDF	0,03	0,001	0,05	0,001
123678-HexaCDF	0,03	0,001	0,05	0,001
123789-HexaCDF	< 0,008	< 0,0003	< 0,01	< 0,0004
234678-HexaCDF	0,05	0,002	0,06	0,002
1234678-HeptaCDF	0,02	0,0007	0,06	0,002
1234789-HeptaCDF	< 0,004	< 0,0002	< 0,03	< 0,0007
OctaCDF	0,03	0,0009	< 0,04	< 0,001
PCDD				
2378-TetraCDD	0,02	0,0006	< 0,02	< 0,0006
12378-PentaCDD	0,05	0,002	0,05	0,001
123478-HexaCDD	0,02	0,0008	0,05	0,001
123678-HexaCDD	0,05	0,002	0,06	0,002
123789-HexaCDD	0,02	0,0007	0,02	0,0005
1234678-HeptaCDD	0,06	0,002	< 0,11	< 0,003
OctaCDD	0,38	0,014	0,25	0,007
TEQ (WHO) excl. LOQ [a]	0,146	0,0054	0,144	0,0039
TEQ (WHO) incl. 1/2 LOQ [b]	0,147	0,0055	0,158	0,0043
TEQ (WHO) incl. LOQ [c]	0,148	0,0055	0,172	0,0047
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,123	0,0046	0,121	0,0033
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,124	0,0046	0,136	0,0037
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,125	0,0047	0,150	0,0041
Recovery Rates	%		%	
13C12-2378-TetraCDF	88		97	
13C12-12378-PentaCDF	118		85	
13C12-23478-PentaCDF	84		98	
13C12-123478-HexaCDF	105		92	
13C12-123678-HexaCDF	100		89	
13C12-123789-HexaCDF	112		85	
13C12-234678-HexaCDF	79		90	
13C12-1234678-HeptaCDF	98		87	
13C12-1234789-HeptaCDF	108		92	
13C12-OctaCDF	110		89	
13C12-2378-TetraCDD	97		95	
13C12-12378-PentaCDD	114		96	
13C12-123478-HexaCDD	61		90	
13C12-123678-HexaCDD	100		91	
13C12-1234678-HeptaCDD	90		88	
13C12-OctaCDD	96		84	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 04: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A3 6N2670.003		A4 6N2670.004	
Fat content [%]	3,6		3,3	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,04	< 0,001	< 0,07	< 0,002
12378-PentaCDF	< 0,04	< 0,001	< 0,05	< 0,002
23478-PentaCDF	0,22	0,008	0,32	0,011
123478-HexaCDF	0,10	0,004	0,11	0,004
123678-HexaCDF	0,09	0,003	0,11	0,004
123789-HexaCDF	< 0,03	< 0,001	< 0,04	< 0,001
234678-HexaCDF	0,08	0,003	0,09	0,003
1234678-HeptaCDF	0,05	0,002	< 0,09	< 0,003
1234789-HeptaCDF	< 0,02	< 0,0006	< 0,14	< 0,005
OctaCDF	< 0,07	< 0,002	< 0,10	< 0,003
PCDD				
2378-TetraCDD	< 0,04	< 0,002	< 0,04	< 0,001
12378-PentaCDD	0,07	0,003	< 0,07	< 0,002
123478-HexaCDD	0,05	0,002	< 0,05	< 0,002
123678-HexaCDD	0,12	0,004	0,11	0,004
123789-HexaCDD	0,05	0,002	< 0,03	< 0,001
1234678-HeptaCDD	0,13	0,005	0,21	0,007
OctaCDD	0,23	0,008	0,29	0,010
TEQ (WHO) excl. LOQ [a]	0,230	0,0083	0,205	0,0068
TEQ (WHO) incl. 1/2 LOQ [b]	0,255	0,0092	0,273	0,0091
TEQ (WHO) incl. LOQ [c]	0,281	0,0101	0,342	0,0114
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,194	0,0070	0,205	0,0068
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,220	0,0079	0,257	0,0086
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,246	0,0088	0,308	0,0103
Recovery Rates	%		%	
13C12-2378-TetraCDF	80		103	
13C12-12378-PentaCDF	81		99	
13C12-23478-PentaCDF	73		107	
13C12-123478-HexaCDF	82		106	
13C12-123678-HexaCDF	80		100	
13C12-123789-HexaCDF	76		105	
13C12-234678-HexaCDF	76		90	
13C12-1234678-HeptaCDF	72		104	
13C12-1234789-HeptaCDF	73		90	
13C12-OctaCDF	70		106	
13C12-2378-TetraCDD	81		100	
13C12-12378-PentaCDD	86		118	
13C12-123478-HexaCDD	84		104	
13C12-123678-HexaCDD	79		105	
13C12-1234678-HeptaCDD	72		111	
13C12-OctaCDD	70		91	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 05: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A5 6N2670.005		A6 6N2670.006	
Fat content [%]	3,4		3,9	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,02	< 0,0006	0,04	0,001
12378-PentaCDF	< 0,009	< 0,0003	< 0,03	< 0,001
23478-PentaCDF	0,11	0,004	0,17	0,007
123478-HexaCDF	0,03	0,001	0,09	0,003
123678-HexaCDF	0,03	0,001	0,09	0,003
123789-HexaCDF	< 0,006	< 0,0002	< 0,01	< 0,0004
234678-HexaCDF	0,04	0,001	0,09	0,004
1234678-HeptaCDF	0,03	0,0009	0,07	0,003
1234789-HeptaCDF	< 0,01	< 0,0004	< 0,03	< 0,001
OctaCDF	0,02	0,0008	0,06	0,002
PCDD				
2378-TetraCDD	< 0,01	< 0,0005	0,05	0,002
12378-PentaCDD	0,04	0,001	0,10	0,004
123478-HexaCDD	0,02	0,0007	0,03	0,001
123678-HexaCDD	0,05	0,002	0,10	0,004
123789-HexaCDD	0,02	0,0006	0,05	0,002
1234678-HeptaCDD	0,06	0,002	0,12	0,005
OctaCDD	0,21	0,007	0,3	0,012
TEQ (WHO) excl. LOQ [a]	0,113	0,0039	0,292	0,0114
TEQ (WHO) incl. 1/2 LOQ [b]	0,121	0,0042	0,293	0,0114
TEQ (WHO) incl. LOQ [c]	0,129	0,0045	0,294	0,0115
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,094	0,0032	0,240	0,0093
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,102	0,0035	0,241	0,0094
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,110	0,0038	0,242	0,0094
Recovery Rates	%		%	
13C12-2378-TetraCDF	88		84	
13C12-12378-PentaCDF	118		88	
13C12-23478-PentaCDF	113		88	
13C12-123478-HexaCDF	86		86	
13C12-123678-HexaCDF	93		84	
13C12-123789-HexaCDF	111		82	
13C12-234678-HexaCDF	95		81	
13C12-1234678-HeptaCDF	96		78	
13C12-1234789-HeptaCDF	101		76	
13C12-OctaCDF	96		74	
13C12-2378-TetraCDD	69		82	
13C12-12378-PentaCDD	114		94	
13C12-123478-HexaCDD	81		87	
13C12-123678-HexaCDD	104		83	
13C12-1234678-HeptaCDD	88		76	
13C12-OctaCDD	84		74	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 06: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A7 6N2670.007		A8 6N2670.008	
Fat content [%]	3,5		3,4	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,07	< 0,002	< 0,10	< 0,003
12378-PentaCDF	< 0,11	< 0,004	< 0,04	< 0,001
23478-PentaCDF	0,19	0,007	0,15	0,005
123478-HexaCDF	0,11	0,004	0,07	0,002
123678-HexaCDF	0,10	0,003	0,05	0,002
123789-HexaCDF	< 0,05	< 0,002	< 0,04	< 0,001
234678-HexaCDF	0,11	0,004	0,10	0,003
1234678-HeptaCDF	< 0,10	< 0,004	< 0,13	< 0,005
1234789-HeptaCDF	< 0,10	< 0,003	< 0,20	< 0,007
OctaCDF	< 0,04	< 0,002	< 0,08	< 0,003
PCDD				
2378-TetraCDD	< 0,04	< 0,002	< 0,04	< 0,002
12378-PentaCDD	0,11	0,004	< 0,08	< 0,003
123478-HexaCDD	0,06	0,002	0,05	0,002
123678-HexaCDD	0,14	0,005	0,07	0,002
123789-HexaCDD	0,18	0,006	0,06	0,002
1234678-HeptaCDD	< 0,17	< 0,006	0,15	0,005
OctaCDD	0,83	0,029	0,41	0,014
TEQ (WHO) excl. LOQ [a]	0,277	0,0096	0,116	0,004
TEQ (WHO) incl. 1/2 LOQ [b]	0,310	0,0107	0,189	0,0065
TEQ (WHO) incl. LOQ [c]	0,342	0,0118	0,262	0,0089
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,223	0,0077	0,117	0,0040
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,255	0,0088	0,169	0,0058
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,288	0,0100	0,221	0,0075
Recovery Rates	%		%	
13C12-2378-TetraCDF	75		110	
13C12-12378-PentaCDF	47		89	
13C12-23478-PentaCDF	56		105	
13C12-123478-HexaCDF	51		86	
13C12-123678-HexaCDF	50		90	
13C12-123789-HexaCDF	73		116	
13C12-234678-HexaCDF	41		64	
13C12-1234678-HeptaCDF	47		79	
13C12-1234789-HeptaCDF	70		107	
13C12-OctaCDF	52		82	
13C12-2378-TetraCDD	83		134	
13C12-12378-PentaCDD	61		117	
13C12-123478-HexaCDD	56		67	
13C12-123678-HexaCDD	54		91	
13C12-1234678-HeptaCDD	54		90	
13C12-OctaCDD	50		87	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 07: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A9 6N2670.009		A10 6N2670.010	
Fat content [%]	3,9		3,5	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,05	< 0,002	0,13	0,005
12378-PentaCDF	< 0,01	< 0,0005	< 0,04	< 0,001
23478-PentaCDF	0,14	0,006	0,17	0,006
123478-HexaCDF	0,09	0,003	0,06	0,002
123678-HexaCDF	0,07	0,003	0,07	0,002
123789-HexaCDF	< 0,03	< 0,001	< 0,10	< 0,003
234678-HexaCDF	0,07	0,003	0,06	0,002
1234678-HeptaCDF	< 0,09	< 0,003	< 0,08	< 0,003
1234789-HeptaCDF	< 0,10	< 0,004	< 0,13	< 0,005
OctaCDF	< 0,12	< 0,005	< 0,06	< 0,002
PCDD				
2378-TetraCDD	< 0,02	< 0,001	< 0,05	< 0,002
12378-PentaCDD	< 0,08	< 0,003	0,11	0,004
123478-HexaCDD	< 0,06	< 0,002	0,05	0,002
123678-HexaCDD	< 0,07	< 0,003	0,17	0,006
123789-HexaCDD	< 0,07	< 0,003	0,08	0,003
1234678-HeptaCDD	< 0,13	< 0,005	0,46	0,016
OctaCDD	0,29	0,011	0,37	0,013
TEQ (WHO) excl. LOQ [a]	0,093	0,0037	0,259	0,0090
TEQ (WHO) incl. 1/2 LOQ [b]	0,164	0,0064	0,289	0,0101
TEQ (WHO) incl. LOQ [c]	0,234	0,0092	0,319	0,0112
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,094	0,0037	0,206	0,0072
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,143	0,0056	0,236	0,0083
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,192	0,0075	0,266	0,0093
Recovery Rates	%		%	
13C12-2378-TetraCDF	99		107	
13C12-12378-PentaCDF	75		111	
13C12-23478-PentaCDF	90		129	
13C12-123478-HexaCDF	75		69	
13C12-123678-HexaCDF	75		87	
13C12-123789-HexaCDF	100		96	
13C12-234678-HexaCDF	71		94	
13C12-1234678-HeptaCDF	66		102	
13C12-1234789-HeptaCDF	119		99	
13C12-OctaCDF	86		105	
13C12-2378-TetraCDD	117		108	
13C12-12378-PentaCDD	95		86	
13C12-123478-HexaCDD	82		96	
13C12-123678-HexaCDD	76		100	
13C12-1234678-HeptaCDD	93		95	
13C12-OctaCDD	89		100	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 08: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A11 6N2670.011		A12 6N2670.012	
Fat content [%]	3,5		3,3	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,03	< 0,001	0,02	0,0007
12378-PentaCDF	< 0,03	< 0,001	< 0,02	< 0,0006
23478-PentaCDF	0,19	0,007	0,12	0,004
123478-HexaCDF	0,09	0,003	0,04	0,001
123678-HexaCDF	0,09	0,003	0,03	0,0008
123789-HexaCDF	< 0,02	< 0,0006	< 0,01	< 0,0004
234678-HexaCDF	0,09	0,003	0,04	0,001
1234678-HeptaCDF	0,12	0,004	< 0,04	< 0,001
1234789-HeptaCDF	< 0,04	< 0,001	< 0,06	< 0,002
OctaCDF	0,17	0,006	< 0,05	< 0,002
PCDD				
2378-TetraCDD	< 0,04	< 0,001	0,02	0,0007
12378-PentaCDD	< 0,05	< 0,002	0,06	0,002
123478-HexaCDD	0,04	0,002	0,03	0,001
123678-HexaCDD	0,10	0,004	0,04	0,001
123789-HexaCDD	0,04	0,002	< 0,02	< 0,0006
1234678-HeptaCDD	0,15	0,005	0,14	0,005
OctaCDD	0,27	0,009	0,22	0,007
TEQ (WHO) excl. LOQ [a]	0,146	0,0051	0,165	0,0054
TEQ (WHO) incl. 1/2 LOQ [b]	0,192	0,0067	0,168	0,0055
TEQ (WHO) incl. LOQ [c]	0,238	0,0082	0,170	0,0056
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,147	0,0051	0,135	0,0044
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,181	0,0063	0,137	0,0045
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,214	0,0074	0,140	0,0046
Recovery Rates	%		%	
13C12-2378-TetraCDF	108		104	
13C12-12378-PentaCDF	84		102	
13C12-23478-PentaCDF	93		99	
13C12-123478-HexaCDF	79		102	
13C12-123678-HexaCDF	80		104	
13C12-123789-HexaCDF	89		111	
13C12-234678-HexaCDF	73		94	
13C12-1234678-HeptaCDF	86		104	
13C12-1234789-HeptaCDF	80		103	
13C12-OctaCDF	82		98	
13C12-2378-TetraCDD	110		107	
13C12-12378-PentaCDD	97		116	
13C12-123478-HexaCDD	75		94	
13C12-123678-HexaCDD	75		80	
13C12-1234678-HeptaCDD	87		113	
13C12-OctaCDD	81		98	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 09: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A13 6N2670.013		A14 6N2670.014	
Fat content [%]	3,5		3,3	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	0,12	0,004	< 0,04	< 0,001
12378-PentaCDF	0,11	0,004	< 0,01	< 0,0005
23478-PentaCDF	0,17	0,006	0,09	0,003
123478-HexaCDF	0,07	0,002	0,03	0,0009
123678-HexaCDF	0,08	0,003	0,03	0,001
123789-HexaCDF	0,02	0,0008	< 0,02	< 0,0005
234678-HexaCDF	0,08	0,003	0,03	0,0009
1234678-HeptaCDF	0,08	0,003	0,03	0,0009
1234789-HeptaCDF	< 0,03	< 0,001	0,01	0,0004
OctaCDF	0,05	0,002	< 0,04	< 0,001
PCDD				
2378-TetraCDD	< 0,02	< 0,0008	< 0,02	< 0,0007
12378-PentaCDD	< 0,04	< 0,002	< 0,02	< 0,0007
123478-HexaCDD	0,04	0,001	0,06	0,002
123678-HexaCDD	0,12	0,004	0,06	0,002
123789-HexaCDD	0,05	0,002	0,02	0,0008
1234678-HeptaCDD	0,14	0,005	0,07	0,002
OctaCDD	0,25	0,009	0,16	0,005
TEQ (WHO) excl. LOQ [a]	0,150	0,0052	0,068	0,0022
TEQ (WHO) incl. 1/2 LOQ [b]	0,183	0,0063	0,093	0,0030
TEQ (WHO) incl. LOQ [c]	0,216	0,0075	0,119	0,0039
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,150	0,0052	0,068	0,0022
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,172	0,0060	0,088	0,0029
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,194	0,0067	0,107	0,0035
Recovery Rates	%		%	
13C12-2378-TetraCDF	100		100	
13C12-12378-PentaCDF	88		86	
13C12-23478-PentaCDF	102		100	
13C12-123478-HexaCDF	94		102	
13C12-123678-HexaCDF	93		99	
13C12-123789-HexaCDF	103		109	
13C12-234678-HexaCDF	92		93	
13C12-1234678-HeptaCDF	96		89	
13C12-1234789-HeptaCDF	104		103	
13C12-OctaCDF	109		104	
13C12-2378-TetraCDD	103		102	
13C12-12378-PentaCDD	64		65	
13C12-123478-HexaCDD	94		98	
13C12-123678-HexaCDD	99		104	
13C12-1234678-HeptaCDD	106		109	
13C12-OctaCDD	97		96	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 10: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A15 6N2670.015		A16 6N2670.016	
Fat content [%]	3,6		3,8	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	0,07	0,003	< 0,02	< 0,0009
12378-PentaCDF	0,02	0,0005	< 0,02	< 0,0008
23478-PentaCDF	0,11	0,004	0,08	0,003
123478-HexaCDF	0,06	0,002	0,04	0,002
123678-HexaCDF	0,05	0,002	0,05	0,002
123789-HexaCDF	< 0,02	< 0,0007	< 0,02	< 0,0006
234678-HexaCDF	0,06	0,002	0,04	0,002
1234678-HeptaCDF	0,06	0,002	0,05	0,002
1234789-HeptaCDF	< 0,02	< 0,0009	0,05	0,002
OctaCDF	< 0,02	< 0,0007	0,17	0,006
PCDD				
2378-TetraCDD	< 0,02	< 0,0008	< 0,03	< 0,001
12378-PentaCDD	< 0,03	< 0,001	< 0,07	< 0,003
123478-HexaCDD	0,03	0,001	0,02	0,0008
123678-HexaCDD	0,06	0,002	0,05	0,002
123789-HexaCDD	0,03	0,001	0,04	0,001
1234678-HeptaCDD	0,08	0,003	< 0,08	< 0,003
OctaCDD	0,14	0,005	0,33	0,013
TEQ (WHO) excl. LOQ [a]	0,094	0,0034	0,065	0,0025
TEQ (WHO) incl. 1/2 LOQ [b]	0,123	0,0044	0,120	0,0046
TEQ (WHO) incl. LOQ [c]	0,152	0,0055	0,176	0,0067
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,094	0,0034	0,066	0,0025
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,114	0,0042	0,102	0,0039
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,135	0,0049	0,139	0,0053
Recovery Rates	%		%	
13C12-2378-TetraCDF	116		104	
13C12-12378-PentaCDF	95		75	
13C12-23478-PentaCDF	100		80	
13C12-123478-HexaCDF	94		68	
13C12-123678-HexaCDF	92		68	
13C12-123789-HexaCDF	101		81	
13C12-234678-HexaCDF	91		70	
13C12-1234678-HeptaCDF	106		59	
13C12-1234789-HeptaCDF	90		88	
13C12-OctaCDF	98		101	
13C12-2378-TetraCDD	108		123	
13C12-12378-PentaCDD	106		77	
13C12-123478-HexaCDD	89		89	
13C12-123678-HexaCDD	86		88	
13C12-1234678-HeptaCDD	100		95	
13C12-OctaCDD	99		96	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 11: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A18 6N2670.017		A19 6N2670.018	
Fat content [%]	3,0		3,1	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,04	< 0,001	0,08	0,002
12378-PentaCDF	< 0,04	< 0,001	< 0,08	< 0,002
23478-PentaCDF	0,13	0,004	< 0,12	< 0,004
123478-HexaCDF	0,04	0,001	0,05	0,002
123678-HexaCDF	0,03	0,0009	0,06	0,002
123789-HexaCDF	< 0,02	< 0,0007	< 0,03	< 0,001
234678-HexaCDF	0,05	0,002	0,06	0,002
1234678-HeptaCDF	< 0,09	< 0,003	0,09	0,003
1234789-HeptaCDF	< 0,12	< 0,004	< 0,08	< 0,003
OctaCDF	0,03	0,001	0,10	0,003
PCDD				
2378-TetraCDD	< 0,03	< 0,0008	< 0,02	< 0,0008
12378-PentaCDD	< 0,04	< 0,001	0,06	0,002
123478-HexaCDD	0,04	0,001	< 0,03	< 0,0009
123678-HexaCDD	0,09	0,003	0,10	0,003
123789-HexaCDD	0,07	0,002	< 0,05	< 0,002
1234678-HeptaCDD	0,12	0,004	0,11	0,003
OctaCDD	0,29	0,009	0,24	0,007
TEQ (WHO) excl. LOQ [a]	0,100	0,0030	0,097	0,003
TEQ (WHO) incl. 1/2 LOQ [b]	0,137	0,0041	0,147	0,0046
TEQ (WHO) incl. LOQ [c]	0,175	0,0053	0,196	0,0061
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,100	0,0030	0,068	0,0021
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,128	0,0039	0,117	0,0036
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,157	0,0047	0,166	0,0052
Recovery Rates	%		%	
13C12-2378-TetraCDF	105		114	
13C12-12378-PentaCDF	125		77	
13C12-23478-PentaCDF	120		90	
13C12-123478-HexaCDF	95		75	
13C12-123678-HexaCDF	96		68	
13C12-123789-HexaCDF	129		125	
13C12-234678-HexaCDF	67		49	
13C12-1234678-HeptaCDF	112		71	
13C12-1234789-HeptaCDF	140		132	
13C12-OctaCDF	126		129	
13C12-2378-TetraCDD	121		128	
13C12-12378-PentaCDD	70		60	
13C12-123478-HexaCDD	97		55	
13C12-123678-HexaCDD	93		57	
13C12-1234678-HeptaCDD	135		94	
13C12-OctaCDD	119		122	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 12: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A20 6N2670.019		A 21 6N2670.020	
Fat content [%]	3,5		4,4	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	0,02	0,0008	< 0,02 ^d	< 0,0009 ^d
12378-PentaCDF	< 0,02	< 0,0007	0,04 ^d	0,002 ^d
23478-PentaCDF	0,32	0,011	0,17 ^d	0,007 ^d
123478-HexaCDF	0,08	0,003	0,14 ^d	0,006 ^d
123678-HexaCDF	0,09	0,003	0,10 ^d	0,004 ^d
123789-HexaCDF	< 0,03	< 0,0009	0,02 ^d	0,0009 ^d
234678-HexaCDF	0,08	0,003	0,08 ^d	0,003 ^d
1234678-HeptaCDF	0,05	0,002	0,11 ^d	0,005 ^d
1234789-HeptaCDF	< 0,02	< 0,0008	< 0,07 ^d	< 0,003 ^d
OctaCDF	0,05	0,002	0,14 ^d	0,006 ^d
PCDD				
2378-TetraCDD	0,06	0,002	< 0,02 ^d	< 0,001 ^d
12378-PentaCDD	0,09	0,003	0,41 ^d	0,018 ^d
123478-HexaCDD	0,04	0,001	0,78 ^d	0,034 ^d
123678-HexaCDD	0,13	0,004	1,21 ^d	0,053 ^d
123789-HexaCDD	0,07	0,002	0,68 ^d	0,030 ^d
1234678-HeptaCDD	0,10	0,003	2,00 ^d	0,087 ^d
OctaCDD	0,25	0,009	1,12 ^d	0,049 ^d
TEQ (WHO) excl. LOQ [a]	0,365	0,0127	0,821 ^d	0,0358 ^d
TEQ (WHO) incl. 1/2 LOQ [b]	0,367	0,0128	0,834 ^d	0,0363 ^d
TEQ (WHO) incl. LOQ [c]	0,369	0,0129	0,846 ^d	0,0369 ^d
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,320	0,0112	0,616 ^d	0,0268 ^d
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,322	0,0112	0,628 ^d	0,0274 ^d
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,324	0,0113	0,641 ^d	0,0279 ^d
Recovery Rates	%		%	
13C12-2378-TetraCDF	109		99	
13C12-12378-PentaCDF	80		110	
13C12-23478-PentaCDF	96		119	
13C12-123478-HexaCDF	99		112	
13C12-123678-HexaCDF	83		106	
13C12-123789-HexaCDF	97		120	
13C12-234678-HexaCDF	83		108	
13C12-1234678-HeptaCDF	100		107	
13C12-1234789-HeptaCDF	86		118	
13C12-OctaCDF	85		112	
13C12-2378-TetraCDD	108		99	
13C12-12378-PentaCDD	100		117	
13C12-123478-HexaCDD	81		114	
13C12-123678-HexaCDD	78		106	
13C12-1234678-HeptaCDD	97		108	
13C12-OctaCDD	85		108	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 13: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A22 6N2670.021		A23 6N2670.022	
Fat content [%]	3,1		3,0	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	0,11	0,003	< 0,02	< 0,0007
12378-PentaCDF	< 0,03	< 0,001	< 0,02	< 0,0007
23478-PentaCDF	0,08	0,002	0,11	0,003
123478-HexaCDF	0,05	0,001	0,06	0,002
123678-HexaCDF	0,05	0,002	0,06	0,002
123789-HexaCDF	< 0,02	< 0,0006	< 0,03	< 0,0008
234678-HexaCDF	0,04	0,001	0,07	0,002
1234678-HeptaCDF	0,07	0,002	0,03	0,0009
1234789-HeptaCDF	< 0,04	< 0,001	< 0,02	< 0,0005
OctaCDF	0,07	0,002	< 0,05	< 0,002
PCDD				
2378-TetraCDD	< 0,06	< 0,002	< 0,04	< 0,001
12378-PentaCDD	< 0,07	< 0,002	0,06	0,002
123478-HexaCDD	0,04	0,001	0,04	0,001
123678-HexaCDD	0,08	0,003	0,04	0,001
123789-HexaCDD	0,06	0,002	0,03	0,001
1234678-HeptaCDD	0,13	0,004	0,10	0,003
OctaCDD	0,45	0,014	0,23	0,007
TEQ (WHO) excl. LOQ [a]	0,085	0,0026	0,146	0,0043
TEQ (WHO) incl. 1/2 LOQ [b]	0,148	0,0045	0,167	0,0049
TEQ (WHO) incl. LOQ [c]	0,211	0,0065	0,189	0,0056
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,085	0,0026	0,116	0,0034
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,132	0,0040	0,138	0,0041
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,178	0,0055	0,159	0,0047
Recovery Rates	%		%	
13C12-2378-TetraCDF	86		63	
13C12-12378-PentaCDF	87		72	
13C12-23478-PentaCDF	84		67	
13C12-123478-HexaCDF	86		72	
13C12-123678-HexaCDF	86		71	
13C12-123789-HexaCDF	112		68	
13C12-234678-HexaCDF	94		71	
13C12-1234678-HeptaCDF	85		67	
13C12-1234789-HeptaCDF	111		65	
13C12-OctaCDF	110		58	
13C12-2378-TetraCDD	94		61	
13C12-12378-PentaCDD	98		70	
13C12-123478-HexaCDD	86		75	
13C12-123678-HexaCDD	82		71	
13C12-1234678-HeptaCDD	92		67	
13C12-OctaCDD	99		61	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 14: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A24 6N2670.023		A25 6N2670.024	
Fat content [%]	3,5		4,9	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	0,14	0,005	0,10	0,005
12378-PentaCDF	< 0,02	< 0,0007	0,10	0,005
23478-PentaCDF	0,18	0,006	0,26	0,013
123478-HexaCDF	0,11	0,004	0,12	0,006
123678-HexaCDF	0,07	0,002	0,12	0,006
123789-HexaCDF	< 0,01	< 0,0005	< 0,03	< 0,001
234678-HexaCDF	0,07	0,002	0,09	0,004
1234678-HeptaCDF	0,04	0,001	0,07	0,003
1234789-HeptaCDF	< 0,02	< 0,0005	< 0,03	< 0,002
OctaCDF	< 0,03	< 0,001	0,05	0,003
PCDD				
2378-TetraCDD	< 0,04	< 0,002	< 0,04	< 0,002
12378-PentaCDD	< 0,10	< 0,003	0,08	0,004
123478-HexaCDD	0,02	0,0009	< 0,03	< 0,001
123678-HexaCDD	0,07	0,003	0,09	0,004
123789-HexaCDD	0,05	0,002	0,04	0,002
1234678-HeptaCDD	0,06	0,002	0,11	0,005
OctaCDD	0,17	0,006	0,31	0,015
TEQ (WHO) excl. LOQ [a]	0,144	0,0050	0,275	0,0135
TEQ (WHO) incl. 1/2 LOQ [b]	0,216	0,0075	0,297	0,0146
TEQ (WHO) incl. LOQ [c]	0,288	0,0100	0,319	0,0157
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,144	0,0050	0,235	0,0115
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,192	0,0067	0,257	0,0126
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,239	0,0083	0,279	0,0137
Recovery Rates	%		%	
13C12-2378-TetraCDF	60		96	
13C12-12378-PentaCDF	83		83	
13C12-23478-PentaCDF	80		88	
13C12-123478-HexaCDF	84		88	
13C12-123678-HexaCDF	88		83	
13C12-123789-HexaCDF	83		90	
13C12-234678-HexaCDF	84		81	
13C12-1234678-HeptaCDF	84		78	
13C12-1234789-HeptaCDF	85		91	
13C12-OctaCDF	76		78	
13C12-2378-TetraCDD	74		88	
13C12-12378-PentaCDD	84		88	
13C12-123478-HexaCDD	92		90	
13C12-123678-HexaCDD	87		85	
13C12-1234678-HeptaCDD	85		81	
13C12-OctaCDD	81		77	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 15: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B1 6N2670.025		B2 6N2670.026	
Fat content [%]	3,6		4,4	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,06	< 0,002	0,05 ^d	0,002 ^d
12378-PentaCDF	< 0,03	< 0,001	0,03 ^d	0,001 ^d
23478-PentaCDF	0,23	0,008	0,14 ^d	0,006 ^d
123478-HexaCDF	0,12	0,004	0,05 ^d	0,002 ^d
123678-HexaCDF	0,10	0,004	0,06 ^d	0,003 ^d
123789-HexaCDF	< 0,05	< 0,002	< 0,01 ^d	< 0,0005 ^d
234678-HexaCDF	0,11	0,004	0,05 ^d	0,002 ^d
1234678-HeptaCDF	< 0,05	< 0,002	0,06 ^d	0,003 ^d
1234789-HeptaCDF	< 0,07	< 0,003	< 0,04 ^d	< 0,002 ^d
OctaCDF	< 0,05	< 0,002	< 0,04 ^d	< 0,002 ^d
PCDD				
2378-TetraCDD	< 0,05	< 0,002	0,03 ^d	0,001 ^d
12378-PentaCDD	< 0,10	< 0,004	< 0,06 ^d	< 0,003 ^d
123478-HexaCDD	0,06	0,002	0,02 ^d	0,0009 ^d
123678-HexaCDD	0,11	0,004	0,06 ^d	0,003 ^d
123789-HexaCDD	0,04	0,002	0,03 ^d	0,001 ^d
1234678-HeptaCDD	0,12	0,004	0,08 ^d	0,004 ^d
OctaCDD	0,27	0,01	0,16 ^d	0,007 ^d
TEQ (WHO) excl. LOQ [a]	0,171	0,0061	0,137 ^d	0,0060 ^d
TEQ (WHO) incl. 1/2 LOQ [b]	0,251	0,0090	0,169 ^d	0,0074 ^d
TEQ (WHO) incl. LOQ [b]	0,332	0,0119	0,201 ^d	0,0088 ^d
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,171	0,0061	0,137 ^d	0,0060 ^d
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,227	0,0081	0,154 ^d	0,0068 ^d
I-TEQ (NATO/CCMS) incl. LOQ [b]	0,283	0,0101	0,170 ^d	0,0075 ^d
Recovery Rates	%		%	
13C12-2378-TetraCDF	117		102	
13C12-12378-PentaCDF	79		143	
13C12-23478-PentaCDF	80		159	
13C12-123478-HexaCDF	87		108	
13C12-123678-HexaCDF	87		108	
13C12-123789-HexaCDF	80		94	
13C12-234678-HexaCDF	76		93	
13C12-1234678-HeptaCDF	81		139	
13C12-1234789-HeptaCDF	107		149	
13C12-OctaCDF	106		133	
13C12-2378-TetraCDD	94		95	
13C12-12378-PentaCDD	101		160	
13C12-123478-HexaCDD	88		138	
13C12-123678-HexaCDD	82		124	
13C12-1234678-HeptaCDD	91		144	
13C12-OctaCDD	96		132	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 16: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B3 6N2670.027		B4 6N2670.028	
Fat content [%]	4,0		3,7	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,02	< 0,0009	< 0,06	< 0,002
12378-PentaCDF	< 0,01	< 0,0004	< 0,02	< 0,0008
23478-PentaCDF	< 0,08	< 0,003	0,10	0,004
123478-HexaCDF	0,04	0,002	0,03	0,001
123678-HexaCDF	0,03	0,001	0,05	0,002
123789-HexaCDF	< 0,01	< 0,0005	< 0,02	< 0,0006
234678-HexaCDF	0,03	0,001	0,03	0,001
1234678-HeptaCDF	0,04	0,002	0,07	0,003
1234789-HeptaCDF	< 0,03	< 0,001	< 0,08	< 0,003
OctaCDF	< 0,07	< 0,003	0,03	0,001
PCDD				
2378-TetraCDD	0,03	0,001	< 0,03	< 0,0009
12378-PentaCDD	< 0,04	< 0,002	< 0,05	< 0,002
123478-HexaCDD	0,02	0,0009	< 0,06	< 0,002
123678-HexaCDD	0,04	0,002	< 0,05	< 0,002
123789-HexaCDD	< 0,03	< 0,001	< 0,05	< 0,002
1234678-HeptaCDD	0,07	0,003	< 0,08	< 0,003
OctaCDD	0,18	0,007	0,19	0,007
TEQ (WHO) excl. LOQ [a]	0,045	0,0018	0,061	0,0023
TEQ (WHO) incl. 1/2 LOQ [b]	0,089	0,0036	0,113	0,0042
TEQ (WHO) incl. LOQ [c]	0,134	0,0053	0,165	0,0061
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,045	0,0018	0,062	0,0023
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,079	0,0032	0,100	0,0037
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,113	0,0045	0,139	0,0052
Recovery Rates	%		%	
13C12-2378-TetraCDF	89		86	
13C12-12378-PentaCDF	89		82	
13C12-23478-PentaCDF	92		88	
13C12-123478-HexaCDF	90		90	
13C12-123678-HexaCDF	95		90	
13C12-123789-HexaCDF	86		78	
13C12-234678-HexaCDF	89		80	
13C12-1234678-HeptaCDF	88		88	
13C12-1234789-HeptaCDF	78		86	
13C12-OctaCDF	58		91	
13C12-2378-TetraCDD	97		89	
13C12-12378-PentaCDD	61		88	
13C12-123478-HexaCDD	91		90	
13C12-123678-HexaCDD	92		88	
13C12-1234678-HeptaCDD	82		90	
13C12-OctaCDD	56		86	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 17: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B5 6N2670.029		B6 6N2670.030	
Fat content [%]	4,1		3,9	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,04	< 0,002	< 0,02	< 0,0006
12378-PentaCDF	< 0,02	< 0,001	< 0,007	< 0,0003
23478-PentaCDF	0,06	0,003	0,09	0,004
123478-HexaCDF	0,04	0,002	0,04	0,002
123678-HexaCDF	0,04	0,002	0,05	0,002
123789-HexaCDF	< 0,03	< 0,001	< 0,007	< 0,0003
234678-HexaCDF	0,03	0,001	0,05	0,002
1234678-HeptaCDF	0,05	0,002	0,05	0,002
1234789-HeptaCDF	< 0,04	< 0,002	< 0,02	< 0,0007
OctaCDF	0,03	0,001	< 0,05	< 0,002
PCDD				
2378-TetraCDD	< 0,02	< 0,0007	0,01	0,0006
12378-PentaCDD	< 0,11	< 0,004	0,05	0,002
123478-HexaCDD	< 0,07	< 0,003	0,03	0,001
123678-HexaCDD	< 0,07	< 0,003	0,07	0,003
123789-HexaCDD	< 0,07	< 0,003	0,03	0,001
1234678-HeptaCDD	0,11	0,005	0,12	0,005
OctaCDD	0,22	0,009	0,22	0,008
TEQ (WHO) excl. LOQ [a]	0,044	0,0018	0,138	0,0053
TEQ (WHO) incl. 1/2 LOQ [b]	0,120	0,0049	0,140	0,0054
TEQ (WHO) incl. LOQ [c]	0,197	0,008	0,141	0,0055
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,044	0,0018	0,114	0,0044
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,094	0,0038	0,115	0,0044
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,144	0,0059	0,117	0,0045
Recovery Rates	%		%	
13C12-2378-TetraCDF	89		104	
13C12-12378-PentaCDF	106		70	
13C12-23478-PentaCDF	110		75	
13C12-123478-HexaCDF	99		81	
13C12-123678-HexaCDF	102		82	
13C12-123789-HexaCDF	68		86	
13C12-234678-HexaCDF	100		77	
13C12-1234678-HeptaCDF	110		77	
13C12-1234789-HeptaCDF	105		86	
13C12-OctaCDF	109		72	
13C12-2378-TetraCDD	95		95	
13C12-12378-PentaCDD	110		78	
13C12-123478-HexaCDD	107		89	
13C12-123678-HexaCDD	109		84	
13C12-1234678-HeptaCDD	110		78	
13C12-OctaCDD	106		72	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 18: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B7 6N2670.031		B8 6N2670.032	
Fat content [%]	4,2		4,4	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,03	< 0,001	< 0,04 ^d	< 0,002 ^d
12378-PentaCDF	< 0,03	< 0,001	0,04 ^d	0,002 ^d
23478-PentaCDF	0,16	0,007	0,40 ^d	0,018 ^d
123478-HexaCDF	0,03	0,001	0,25 ^d	0,011 ^d
123678-HexaCDF	0,05	0,002	0,20 ^d	0,009 ^d
123789-HexaCDF	< 0,03	< 0,001	< 0,05 ^d	< 0,002 ^d
234678-HexaCDF	0,05	0,002	0,17 ^d	0,007 ^d
1234678-HeptaCDF	0,05	0,002	0,20 ^d	0,009 ^d
1234789-HeptaCDF	< 0,08	< 0,003	0,06 ^d	0,002 ^d
OctaCDF	< 0,05	< 0,002	0,22 ^d	0,010 ^d
PCDD				
2378-TetraCDD	< 0,02	< 0,0008	0,10 ^d	0,004 ^d
12378-PentaCDD	< 0,09	< 0,004	0,56 ^d	0,025 ^d
123478-HexaCDD	0,03	0,001	1,13 ^d	0,050 ^d
123678-HexaCDD	0,05	0,002	1,38 ^d	0,061 ^d
123789-HexaCDD	< 0,02	< 0,0007	0,88 ^d	0,039 ^d
1234678-HeptaCDD	0,11	0,004	4,53 ^d	0,199 ^d
OctaCDD	0,20	0,009	2,08 ^d	0,091 ^d
TEQ (WHO) excl. LOQ [a]	0,101	0,0043	1,31 ^d	0,0574 ^d
TEQ (WHO) incl. 1/2 LOQ [b]	0,162	0,0068	1,31 ^d	0,0576 ^d
TEQ (WHO) incl. LOQ [c]	0,224	0,0094	1,31 ^d	0,0578 ^d
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,101	0,0043	1,03 ^d	0,0452 ^d
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,139	0,0059	1,03 ^d	0,0454 ^d
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,177	0,0075	1,04 ^d	0,0456 ^d
Recovery Rates	%		%	
13C12-2378-TetraCDF	95		73	
13C12-12378-PentaCDF	90		91	
13C12-23478-PentaCDF	98		84	
13C12-123478-HexaCDF	76		86	
13C12-123678-HexaCDF	78		84	
13C12-123789-HexaCDF	84		74	
13C12-234678-HexaCDF	47		78	
13C12-1234678-HeptaCDF	73		72	
13C12-1234789-HeptaCDF	70		71	
13C12-OctaCDF	60		61	
13C12-2378-TetraCDD	94		71	
13C12-12378-PentaCDD	99		86	
13C12-123478-HexaCDD	68		82	
13C12-123678-HexaCDD	69		78	
13C12-1234678-HeptaCDD	78		73	
13C12-OctaCDD	59		64	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 19: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B9 6N2670.033		B13 6N2670.034	
Fat content [%]	3,5		3,8	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,02	< 0,0007	< 0,06	< 0,002
12378-PentaCDF	< 0,02	< 0,0007	0,07	0,003
23478-PentaCDF	0,20	0,007	0,28	0,011
123478-HexaCDF	0,07	0,002	0,16	0,006
123678-HexaCDF	0,05	0,002	0,17	0,006
123789-HexaCDF	< 0,01	< 0,0004	0,10	0,004
234678-HexaCDF	0,06	0,002	0,09	0,003
1234678-HeptaCDF	0,05	0,002	0,14	0,005
1234789-HeptaCDF	< 0,01	< 0,0005	0,16	0,006
OctaCDF	0,10	0,003	0,35	0,013
PCDD				
2378-TetraCDD	0,03	0,001	< 0,05	< 0,002
12378-PentaCDD	0,06	0,002	< 0,06	< 0,002
123478-HexaCDD	0,04	0,001	0,08	0,003
123678-HexaCDD	0,07	0,003	0,09	0,003
123789-HexaCDD	0,04	0,001	0,17	0,006
1234678-HeptaCDD	0,20	0,007	0,28	0,011
OctaCDD	1,31	0,046	0,71	0,027
TEQ (WHO) excl. LOQ [a]	0,222	0,0079	0,235	0,0089
TEQ (WHO) incl. 1/2 LOQ [b]	0,224	0,0079	0,291	0,0111
TEQ (WHO) incl. LOQ [c]	0,226	0,0080	0,348	0,0132
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,196	0,0069	0,236	0,0090
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,198	0,0070	0,277	0,0105
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,200	0,0071	0,319	0,0121
Recovery Rates	%		%	
13C12-2378-TetraCDF	86		125	
13C12-12378-PentaCDF	84		91	
13C12-23478-PentaCDF	94		99	
13C12-123478-HexaCDF	86		96	
13C12-123678-HexaCDF	84		96	
13C12-123789-HexaCDF	56		128	
13C12-234678-HexaCDF	73		96	
13C12-1234678-HeptaCDF	96		97	
13C12-1234789-HeptaCDF	96		122	
13C12-OctaCDF	97		138	
13C12-2378-TetraCDD	95		127	
13C12-12378-PentaCDD	97		63	
13C12-123478-HexaCDD	82		95	
13C12-123678-HexaCDD	94		96	
13C12-1234678-HeptaCDD	104		105	
13C12-OctaCDD	95		127	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 20: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B14 6N2670.035		B15 6N2670.036	
Fat content [%]	3,0		3,6	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
PCDF				
2378-TetraCDF	< 0,04 ^d	< 0,001 ^d	0,01 ^d	0,0005 ^d
12378-PentaCDF	0,04 ^d	0,001 ^d	< 0,009 ^d	< 0,0003 ^d
23478-PentaCDF	0,17 ^d	0,005 ^d	0,14 ^d	0,005 ^d
123478-HexaCDF	0,09 ^d	0,003 ^d	0,04 ^d	0,002 ^d
123678-HexaCDF	0,08 ^d	0,002 ^d	0,04 ^d	0,001 ^d
123789-HexaCDF	< 0,04 ^d	< 0,001 ^d	< 0,009 ^d	< 0,0003 ^d
234678-HexaCDF	0,09 ^d	0,003 ^d	0,04 ^d	0,001 ^d
1234678-HeptaCDF	0,09 ^d	0,003 ^d	0,02 ^d	0,0007 ^d
1234789-HeptaCDF	< 0,04 ^d	< 0,001 ^d	< 0,008 ^d	< 0,0003 ^d
OctaCDF	< 0,10 ^d	< 0,003 ^d	0,03 ^d	0,0009 ^d
PCDD				
2378-TetraCDD	< 0,04 ^d	< 0,001 ^d	0,03 ^d	0,001 ^d
12378-PentaCDD	< 0,05 ^d	< 0,001 ^d	0,04 ^d	0,001 ^d
123478-HexaCDD	0,10 ^d	0,003 ^d	0,02 ^d	0,0007 ^d
123678-HexaCDD	0,09 ^d	0,003 ^d	0,04 ^d	0,001 ^d
123789-HexaCDD	0,05 ^d	0,002 ^d	0,02 ^d	0,0007 ^d
1234678-HeptaCDD	< 0,23 ^d	< 0,007 ^d	0,07 ^d	0,002 ^d
OctaCDD	0,49 ^d	0,014 ^d	0,16 ^d	0,006 ^d
TEQ (WHO) excl. LOQ [a]	0,135 ^d	0,0040 ^d	0,162 ^d	0,0058 ^d
TEQ (WHO) incl. 1/2 LOQ [b]	0,187 ^d	0,0055 ^d	0,163 ^d	0,0058 ^d
TEQ (WHO) incl. LOQ [c]	0,239 ^d	0,0071 ^d	0,163 ^d	0,0058 ^d
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,135 ^d	0,0040 ^d	0,142 ^d	0,0051 ^d
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,175 ^d	0,0052 ^d	0,143 ^d	0,0051 ^d
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,214 ^d	0,0063 ^d	0,143 ^d	0,0051 ^d
Recovery Rates	%		%	
13C12-2378-TetraCDF	102		98	
13C12-12378-PentaCDF	52		137	
13C12-23478-PentaCDF	59		152	
13C12-123478-HexaCDF	93		96	
13C12-123678-HexaCDF	93		93	
13C12-123789-HexaCDF	125		136	
13C12-234678-HexaCDF	94		121	
13C12-1234678-HeptaCDF	94		128	
13C12-1234789-HeptaCDF	121		135	
13C12-OctaCDF	128		132	
13C12-2378-TetraCDD	106		101	
13C12-12378-PentaCDD	98		141	
13C12-123478-HexaCDD	93		111	
13C12-123678-HexaCDD	96		113	
13C12-1234678-HeptaCDD	107		127	
13C12-OctaCDD	120		129	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 21: Results of the analysis of milk samples for PCDF/Ds; the results refer to the fat-weight and to the fresh-weight

Original Sample Name	B17	
GfA Sample No.	6N2670.037	
Fat content [%]	4,6	
Unit	pg/g fat-weight	pg/g fresh-weight
PCDF		
2378-TetraCDF	0,04	0,002
12378-PentaCDF	< 0,03	< 0,001
23478-PentaCDF	0,17	0,008
123478-HexaCDF	0,05	0,002
123678-HexaCDF	0,06	0,003
123789-HexaCDF	< 0,02	< 0,0009
234678-HexaCDF	0,07	0,003
1234678-HeptaCDF	0,06	0,003
1234789-HeptaCDF	< 0,05	< 0,002
OctaCDF	< 0,02	< 0,0009
PCDD		
2378-TetraCDD	< 0,04	< 0,002
12378-PentaCDD	0,06	0,003
123478-HexaCDD	0,02	0,001
123678-HexaCDD	0,09	0,004
123789-HexaCDD	< 0,02	< 0,0009
1234678-HeptaCDD	0,07	0,003
OctaCDD	0,16	0,007
TEQ (WHO) excl. LOQ [a]	0,178	0,0081
TEQ (WHO) incl. 1/2 LOQ [b]	0,202	0,0092
TEQ (WHO) incl. LOQ [c]	0,225	0,0102
I-TEQ (NATO/CCMS) excl. LOQ [a]	0,148	0,0067
I-TEQ (NATO/CCMS) incl. 1/2 LOQ [b]	0,172	0,0078
I-TEQ (NATO/CCMS) incl. LOQ [c]	0,195	0,0089
Recovery Rates	%	
13C12-2378-TetraCDF	96	
13C12-12378-PentaCDF	98	
13C12-23478-PentaCDF	105	
13C12-123478-HexaCDF	86	
13C12-123678-HexaCDF	86	
13C12-123789-HexaCDF	97	
13C12-234678-HexaCDF	81	
13C12-1234678-HeptaCDF	93	
13C12-1234789-HeptaCDF	82	
13C12-OctaCDF	81	
13C12-2378-TetraCDD	98	
13C12-12378-PentaCDD	109	
13C12-123478-HexaCDD	80	
13C12-123678-HexaCDD	77	
13C12-1234678-HeptaCDD	94	
13C12-OctaCDD	84	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 22: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A1 6N2670.001		A2 6N2670.002	
Fat content [%]	3,6		2,7	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,03 ^d	0,037 ^d	1,18	0,032
PCB 81	0,29 ^d	0,01 ^d	0,24	0,006
PCB 126	1,27 ^d	0,046 ^d	1,17	0,032
PCB 169	0,61 ^d	0,022 ^d	0,35	0,010
Mono-ortho PCB				
PCB 105	25,6 ^d	0,928 ^d	23,3	0,632
PCB 114	< 1,33 ^d	< 0,048 ^d	1,04	0,028
PCB 118	107 ^d	3,89 ^d	81,0	2,19
PCB 123	< 1,34 ^d	< 0,049 ^d	1,33	0,036
PCB 156	10,9 ^d	0,397 ^d	10,1	0,274
PCB 157	4,8 ^d	0,174 ^d	4,82	0,131
PCB 167	6,39 ^d	0,232 ^d	4,66	0,126
PCB 189	< 1,80 ^d	< 0,065 ^d	< 2,22	< 0,060
TEQ 12 WHO PCB excl. LOQ [a]	0,155 ^d	0,0056 ^d	0,139	0,0038
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,155 ^d	0,0056 ^d	0,139	0,0038
TEQ 12 WHO PCB incl. LOQ [c]	0,156 ^d	0,0056 ^d	0,139	0,0038
Recovery Rates	%		%	
13C12-TetraCB(#81)	72		70	
13C12-TetraCB(#77)	84		78	
13C12-PentaCB(#123)	94		95	
13C12-PentaCB(#118)	94		89	
13C12-PentaCB(#114)	97		98	
13C12-PentaCB(#105)	106		94	
13C12-PentaCB(#126)	72		87	
13C12-HexaCB(#167)	87		82	
13C12-HexaCB(#156)	98		81	
13C12-HexaCB(#157)	95		89	
13C12-HexaCB(#169)	134		119	
13C12-HeptaCB(#189)	82		73	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 23: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A3 6N2670.003		A4 6N2670.004	
Fat content [%]	3,6		3,3	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,04	0,037	1,17	0,039
PCB 81	0,32	0,011	0,31	0,010
PCB 126	1,97	0,071	2,43	0,081
PCB 169	0,56	0,022	0,65	0,022
Mono-ortho PCB				
PCB 105	43,8	1,57	36,4	1,21
PCB 114	< 1,81	< 0,065	1,41	0,047
PCB 118	158	5,69	142	4,74
PCB 123	< 1,96	< 0,070	1,74	0,058
PCB 156	14,9	0,537	16,3	0,544
PCB 157	8,06	0,290	8,17	0,272
PCB 167	6,34	0,228	8,48	0,282
PCB 189	< 7,70	< 0,277	< 3,07	< 0,102
TEQ 12 WHO PCB excl. LOQ [a]	0,234	0,0084	0,281	0,0094
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,235	0,0084	0,281	0,0094
TEQ 12 WHO PCB incl. LOQ [c]	0,236	0,0085	0,281	0,0094
Recovery Rates	%		%	
13C12-TetraCB(#81)	64		71	
13C12-TetraCB(#77)	65		80	
13C12-PentaCB(#123)	101		92	
13C12-PentaCB(#118)	94		86	
13C12-PentaCB(#114)	94		93	
13C12-PentaCB(#105)	67		75	
13C12-PentaCB(#126)	53		91	
13C12-HexaCB(#167)	89		75	
13C12-HexaCB(#156)	74		65	
13C12-HexaCB(#157)	89		74	
13C12-HexaCB(#169)	71		118	
13C12-HeptaCB(#189)	71		72	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 24: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A5 6N2670.005		A6 6N2670.006	
Fat content [%]	3,5		3,9	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	0,77	0,027	1,04 ^d	0,040 ^d
PCB 81	0,19	0,007	0,23 ^d	0,009 ^d
PCB 126	1,16	0,040	1,54 ^d	0,060 ^d
PCB 169	0,39	0,014	0,46 ^d	0,018 ^d
Mono-ortho PCB				
PCB 105	26,7	0,922	23,0 ^d	0,895 ^d
PCB 114	< 1,30	< 0,045	< 1,38 ^d	< 0,054 ^d
PCB 118	97,6	3,37	86,2 ^d	3,35 ^d
PCB 123	< 0,78	< 0,027	< 1,49 ^d	< 0,058 ^d
PCB 156	9,35	0,323	9,87 ^d	0,384 ^d
PCB 157	< 7,20	< 0,249	4,32 ^d	0,168 ^d
PCB 167	5,44	0,188	4,94 ^d	0,192 ^d
PCB 189	< 3,59	< 0,124	< 2,06 ^d	< 0,080 ^d
TEQ 12 WHO PCB excl. LOQ [a]	0,137	0,0047	0,177 ^d	0,0069 ^d
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,140	0,0048	0,178 ^d	0,0069 ^d
TEQ 12 WHO PCB incl. LOQ [c]	0,142	0,0049	0,178 ^d	0,0069 ^d
Recovery Rates	%		%	
13C12-TetraCB(#81)	113		52	
13C12-TetraCB(#77)	102		67	
13C12-PentaCB(#123)	104		94	
13C12-PentaCB(#118)	101		93	
13C12-PentaCB(#114)	114		97	
13C12-PentaCB(#105)	102		90	
13C12-PentaCB(#126)	88		87	
13C12-HexaCB(#167)	105		84	
13C12-HexaCB(#156)	117		78	
13C12-HexaCB(#157)	116		84	
13C12-HexaCB(#169)	80		110	
13C12-HeptaCB(#189)	119		82	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 25: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A7 6N2670.007		A8 6N2670.008	
Fat content [%]	3,5		3,4	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	0,98	0,034	2,48	0,085
PCB 81	0,32	0,011	< 0,35	< 0,012
PCB 126	1,65	0,057	1,96	0,067
PCB 169	0,51	0,018	0,47	0,016
Mono-ortho PCB				
PCB 105	24,7	0,853	25,9	0,885
PCB 114	< 1,57	< 0,054	< 1,06	< 0,036
PCB 118	98,5	3,41	93,7	3,19
PCB 123	1,23	0,043	< 1,29	< 0,044
PCB 156	11,9	0,411	12,5	0,425
PCB 157	5,38	0,186	6,14	0,21
PCB 167	4,43	0,153	6,22	0,212
PCB 189	< 2,29	< 0,079	< 2,97	< 0,101
TEQ 12 WHO PCB excl. LOQ [a]	0,191	0,0066	0,223	0,0076
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,192	0,0066	0,223	0,0076
TEQ 12 WHO PCB incl. LOQ [c]	0,192	0,0066	0,224	0,0076
Recovery Rates	%		%	
13C12-TetraCB(#81)	39		60	
13C12-TetraCB(#77)	48		76	
13C12-PentaCB(#123)	65		78	
13C12-PentaCB(#118)	65		72	
13C12-PentaCB(#114)	66		91	
13C12-PentaCB(#105)	65		64	
13C12-PentaCB(#126)	71		115	
13C12-HexaCB(#167)	58		53	
13C12-HexaCB(#156)	55		43	
13C12-HexaCB(#157)	58		59	
13C12-HexaCB(#169)	101		158	
13C12-HeptaCB(#189)	59		48	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 26: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A9 6N2670.009		A10 6N2670.010	
Fat content [%]	3,9		3,5	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,31	0,051	2,28	0,080
PCB 81	0,21	0,008	0,28	0,010
PCB 126	1,42	0,056	1,57	0,055
PCB 169	0,44	0,017	0,37	0,013
Mono-ortho PCB				
PCB 105	25,8	1,01	23,5	0,822
PCB 114	< 0,99	< 0,039	1,33	0,046
PCB 118	91,1	3,56	98,8	3,46
PCB 123	< 1,06	< 0,042	< 1,01	< 0,035
PCB 156	10,2	0,397	10,6	0,370
PCB 157	4,94	0,193	4,60	0,161
PCB 167	5,76	0,225	5,56	0,195
PCB 189	< 1,95	< 0,076	< 1,73	< 0,060
TEQ 12 WHO PCB excl. LOQ [a]	0,166	0,0065	0,182	0,0064
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,166	0,0065	0,182	0,0064
TEQ 12 WHO PCB incl. LOQ [c]	0,167	0,0065	0,182	0,0064
Recovery Rates	%		%	
13C12-TetraCB(#81)	50		67	
13C12-TetraCB(#77)	61		81	
13C12-PentaCB(#123)	94		99	
13C12-PentaCB(#118)	92		94	
13C12-PentaCB(#114)	97		97	
13C12-PentaCB(#105)	82		92	
13C12-PentaCB(#126)	91		105	
13C12-HexaCB(#167)	84		84	
13C12-HexaCB(#156)	71		81	
13C12-HexaCB(#157)	81		83	
13C12-HexaCB(#169)	116		99	
13C12-HeptaCB(#189)	78		83	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 27: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A11 6N2670.011		A12 6N2670.012	
Fat content [%]	3,5		3,3	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	0,70	0,024	1,18	0,039
PCB 81	0,20	0,007	0,21	0,007
PCB 126	1,60	0,055	1,26	0,041
PCB 169	0,60	0,021	0,31	0,010
Mono-ortho PCB				
PCB 105	29,1	1,01	20,2	0,659
PCB 114	1,28	0,044	1,00	0,033
PCB 118	105	3,64	81,0	2,64
PCB 123	< 1,10	< 0,038	0,94	0,031
PCB 156	14,5	0,501	10,2	0,333
PCB 157	7,47	0,259	5,14	0,168
PCB 167	7,14	0,247	4,73	0,154
PCB 189	< 3,21	< 0,111	< 2,69	< 0,088
TEQ 12 WHO PCB excl. LOQ [a]	0,191	0,0066	0,148	0,0048
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,191	0,0066	0,148	0,0048
TEQ 12 WHO PCB incl. LOQ [c]	0,191	0,0066	0,148	0,0048
Recovery Rates	%		%	
13C12-TetraCB(#81)	63		71	
13C12-TetraCB(#77)	76		76	
13C12-PentaCB(#123)	77		91	
13C12-PentaCB(#118)	73		82	
13C12-PentaCB(#114)	79		96	
13C12-PentaCB(#105)	82		84	
13C12-PentaCB(#126)	99		102	
13C12-HexaCB(#167)	76		73	
13C12-HexaCB(#156)	92		89	
13C12-HexaCB(#157)	84		86	
13C12-HexaCB(#169)	142		142	
13C12-HeptaCB(#189)	78		62	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 28: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A13 6N2670.013		A14 6N2670.014	
Fat content [%]	3,5		3,3	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,78	0,062	1,52 ^d	0,050 ^d
PCB 81	0,25	0,009	0,24 ^d	0,008 ^d
PCB 126	1,62	0,056	1,05 ^d	0,034 ^d
PCB 169	0,40	0,014	0,41 ^d	0,013 ^d
Mono-ortho PCB				
PCB 105	21,9	0,756	19,6 ^d	0,640 ^d
PCB 114	< 0,69	< 0,024	< 0,18 ^d	< 0,006 ^d
PCB 118	81,0	2,80	63,2 ^d	2,06 ^d
PCB 123	< 0,73	< 0,025	0,32 ^d	0,010 ^d
PCB 156	8,18	0,283	6,91 ^d	0,225 ^d
PCB 157	4,28	0,148	3,11 ^d	0,101 ^d
PCB 167	4,71	0,163	3,73 ^d	0,122 ^d
PCB 189	0,54	0,019	< 0,88 ^d	< 0,029 ^d
TEQ 12 WHO PCB excl. LOQ [a]	0,182	0,0063	0,123 ^d	0,004 ^d
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,183	0,0063	0,123 ^d	0,004 ^d
TEQ 12 WHO PCB incl. LOQ [c]	0,183	0,0063	0,123 ^d	0,004 ^d
Recovery Rates	%		%	
13C12-TetraCB(#81)	62		63	
13C12-TetraCB(#77)	69		69	
13C12-PentaCB(#123)	94		94	
13C12-PentaCB(#118)	88		92	
13C12-PentaCB(#114)	95		98	
13C12-PentaCB(#105)	105		102	
13C12-PentaCB(#126)	97		100	
13C12-HexaCB(#167)	83		81	
13C12-HexaCB(#156)	105		98	
13C12-HexaCB(#157)	96		93	
13C12-HexaCB(#169)	122		125	
13C12-HeptaCB(#189)	89		78	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 29: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A15 6N2670.015		A16 6N2670.016	
Fat content [%]	3,6		4,0	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	3,00	0,109	4,77	0,192
PCB 81	0,75	0,027	0,42	0,017
PCB 126	1,78	0,064	2,50	0,101
PCB 169	0,41	0,015	0,57	0,023
Mono-ortho PCB				
PCB 105	26,5	0,963	20,9	0,841
PCB 114	2,14	0,078	< 0,75	< 0,030
PCB 118	98,4	3,57	85,6	3,45
PCB 123	< 1,37	< 0,050	< 0,81	< 0,033
PCB 156	10,7	0,390	8,72	0,351
PCB 157	5,66	0,206	< 4,73	< 0,191
PCB 167	5,12	0,186	5,12	0,206
PCB 189	< 1,75	< 0,064	< 1,58	< 0,064
TEQ 12 WHO PCB excl. LOQ [a]	0,204	0,0074	0,271	0,0109
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,204	0,0074	0,273	0,0110
TEQ 12 WHO PCB incl. LOQ [c]	0,204	0,0074	0,274	0,0110
Recovery Rates	%		%	
13C12-TetraCB(#81)	67		52	
13C12-TetraCB(#77)	70		55	
13C12-PentaCB(#123)	73		72	
13C12-PentaCB(#118)	65		71	
13C12-PentaCB(#114)	83		74	
13C12-PentaCB(#105)	80		80	
13C12-PentaCB(#126)	93		83	
13C12-HexaCB(#167)	50		70	
13C12-HexaCB(#156)	75		85	
13C12-HexaCB(#157)	59		81	
13C12-HexaCB(#169)	109		68	
13C12-HeptaCB(#189)	51		65	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 30: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A18 6N2670.017		A19 6N2670.018	
Fat content [%]	3,0		3,1	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,06	0,032	1,70	0,053
PCB 81	0,26	0,008	0,31	0,010
PCB 126	1,29	0,039	1,78	0,055
PCB 169	0,37	0,011	0,71	0,022
Mono-ortho PCB				
PCB 105	20,8	0,626	38,1	1,18
PCB 114	< 1,07	< 0,032	2,52	0,078
PCB 118	83,2	2,51	133	4,12
PCB 123	< 1,17	< 0,035	1,10	0,034
PCB 156	8,22	0,248	16,5	0,512
PCB 157	3,46	0,104	11,2	0,349
PCB 167	4,34	0,131	8,41	0,261
PCB 189	< 2,05	< 0,062	< 3,53	< 0,109
TEQ 12 WHO PCB excl. LOQ [a]	0,149	0,0045	0,217	0,0068
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,149	0,0045	0,218	0,0068
TEQ 12 WHO PCB incl. LOQ [c]	0,150	0,0045	0,218	0,0068
Recovery Rates	%		%	
13C12-TetraCB(#81)	64		62	
13C12-TetraCB(#77)	69		72	
13C12-PentaCB(#123)	94		78	
13C12-PentaCB(#118)	94		70	
13C12-PentaCB(#114)	97		88	
13C12-PentaCB(#105)	101		88	
13C12-PentaCB(#126)	104		122	
13C12-HexaCB(#167)	87		50	
13C12-HexaCB(#156)	99		79	
13C12-HexaCB(#157)	98		62	
13C12-HexaCB(#169)	86		136	
13C12-HeptaCB(#189)	84		43	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 31: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A20 6N2670.019		A21 6N2670.020	
Fat content [%]	3,5		3,0	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,13	0,039	1,24 ^d	0,037 ^d
PCB 81	0,30	0,010	0,38 ^d	0,011 ^d
PCB 126	2,34	0,082	1,86 ^d	0,056 ^d
PCB 169	0,71	0,025	0,51 ^d	0,015 ^d
Mono-ortho PCB				
PCB 105	26,5	0,924	32,5 ^d	0,983 ^d
PCB 114	2,30	0,080	2,84 ^d	0,086 ^d
PCB 118	102	3,55	134 ^d	4,05 ^d
PCB 123	0,79	0,028	1,25 ^d	0,038 ^d
PCB 156	12,0	0,417	12,0 ^d	0,362 ^d
PCB 157	5,39	0,188	5,61 ^d	0,170 ^d
PCB 167	5,78	0,201	5,50 ^d	0,166 ^d
PCB 189	2,14	0,074	< 2,34 ^d	< 0,071 ^d
TEQ 12 WHO PCB excl. LOQ [a]	0,264	0,0092	0,218 ^d	0,0066 ^d
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,264	0,0092	0,218 ^d	0,0066 ^d
TEQ 12 WHO PCB incl. LOQ [c]	0,264	0,0092	0,218 ^d	0,0066 ^d
Recovery Rates	%		%	
13C12-TetraCB(#81)	61		68	
13C12-TetraCB(#77)	73		80	
13C12-PentaCB(#123)	90		82	
13C12-PentaCB(#118)	89		85	
13C12-PentaCB(#114)	91		89	
13C12-PentaCB(#105)	119		97	
13C12-PentaCB(#126)	137		105	
13C12-HexaCB(#167)	83		74	
13C12-HexaCB(#156)	117		89	
13C12-HexaCB(#157)	97		79	
13C12-HexaCB(#169)	128		107	
13C12-HeptaCB(#189)	74		81	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 32: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A22 6N2670.021		A23 6N2670.022	
Fat content [%]	3,1		3,0	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,88	0,058	0,84	0,025
PCB 81	0,14	0,004	0,27	0,008
PCB 126	1,45	0,044	1,20	0,035
PCB 169	0,30	0,009	0,36	0,011
Mono-ortho PCB				
PCB 105	15,4	0,472	22,9	0,673
PCB 114	< 1,82	< 0,056	< 1,86	< 0,055
PCB 118	55,7	1,71	89,1	2,63
PCB 123	< 1,90	< 0,058	1,39	0,041
PCB 156	7,98	0,245	9,98	0,294
PCB 157	< 2,76	< 0,085	< 8,99	< 0,265
PCB 167	3,26	0,100	< 9,69	< 0,285
PCB 189	< 2,87	< 0,088	< 11,0	< 0,325
TEQ 12 WHO PCB excl. LOQ [a]	0,159	0,0049	0,140	0,0041
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,161	0,0049	0,143	0,0042
TEQ 12 WHO PCB incl. LOQ [c]	0,162	0,0050	0,146	0,0043
Recovery Rates	%		%	
13C12-TetraCB(#81)	63		64	
13C12-TetraCB(#77)	68		60	
13C12-PentaCB(#123)	101		82	
13C12-PentaCB(#118)	99		75	
13C12-PentaCB(#114)	98		79	
13C12-PentaCB(#105)	116		74	
13C12-PentaCB(#126)	90		73	
13C12-HexaCB(#167)	92		72	
13C12-HexaCB(#156)	109		68	
13C12-HexaCB(#157)	109		75	
13C12-HexaCB(#169)	140		70	
13C12-HeptaCB(#189)	83		71	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 33: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	A24 6N2670.023		A25 6N2670.024	
Fat content [%]	3,5		4,9	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	2,21	0,077	0,81	0,040
PCB 81	0,34	0,012	0,26	0,013
PCB 126	2,04	0,071	1,32	0,065
PCB 169	0,40	0,014	0,41	0,020
Mono-ortho PCB				
PCB 105	28,9	1,00	22,4	1,10
PCB 114	< 1,99	< 0,069	< 4,74	< 0,233
PCB 118	123	4,27	86,8	4,26
PCB 123	< 2,03	< 0,070	0,62	0,030
PCB 156	13,3	0,46	< 15,5	< 0,760
PCB 157	< 6,17	< 0,214	< 15,8	< 0,774
PCB 167	< 6,64	< 0,231	< 16,1	< 0,788
PCB 189	< 6,31	< 0,219	< 12,5	< 0,612
TEQ 12 WHO PCB excl. LOQ [a]	0,230	0,0080	0,147	0,0072
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,232	0,0081	0,157	0,0077
TEQ 12 WHO PCB incl. LOQ [c]	0,235	0,0082	0,167	0,0082
Recovery Rates	%		%	
13C12-TetraCB(#81)	75		72	
13C12-TetraCB(#77)	68		75	
13C12-PentaCB(#123)	105		81	
13C12-PentaCB(#118)	96		89	
13C12-PentaCB(#114)	93		83	
13C12-PentaCB(#105)	102		86	
13C12-PentaCB(#126)	87		90	
13C12-HexaCB(#167)	96		84	
13C12-HexaCB(#156)	101		100	
13C12-HexaCB(#157)	100		92	
13C12-HexaCB(#169)	90		94	
13C12-HeptaCB(#189)	107		134	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 34: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B1 6N2670.025		B2 6N2670.026	
Fat content [%]	3,6		4,4	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,15	0,041	2,46	0,108
PCB 81	0,35	0,012	0,19	0,008
PCB 126	2,83	0,102	1,91	0,084
PCB 169	0,45	0,016	0,31	0,014
Mono-ortho PCB				
PCB 105	33,9	1,22	35,3	1,55
PCB 114	1,61	0,058	< 1,74	< 0,076
PCB 118	128	4,58	122	5,35
PCB 123	1,74	0,063	1,38	0,061
PCB 156	15,0	0,538	10,0	0,442
PCB 157	7,51	0,270	5,77	0,254
PCB 167	8,41	0,302	5,39	0,237
PCB 189	< 3,40	< 0,122	< 2,34	< 0,103
TEQ 12 WHO PCB excl. LOQ [a]	0,316	0,0113	0,219	0,0096
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,316	0,0114	0,219	0,0096
TEQ 12 WHO PCB incl. LOQ [c]	0,316	0,0114	0,220	0,0097
Recovery Rates	%		%	
13C12-TetraCB(#81)	64		66	
13C12-TetraCB(#77)	70		63	
13C12-PentaCB(#123)	90		129	
13C12-PentaCB(#118)	87		116	
13C12-PentaCB(#114)	92		122	
13C12-PentaCB(#105)	101		96	
13C12-PentaCB(#126)	88		77	
13C12-HexaCB(#167)	73		111	
13C12-HexaCB(#156)	115		103	
13C12-HexaCB(#157)	97		144	
13C12-HexaCB(#169)	145		71	
13C12-HeptaCB(#189)	70		89	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 35: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B3 6N2670.027		B4 6N2670.028	
Fat content [%]	4,0		3,7	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	0,88	0,035	1,03	0,038
PCB 81	0,23	0,009	0,21	0,008
PCB 126	1,17	0,047	1,17	0,043
PCB 169	0,31	0,012	0,34	0,012
Mono-ortho PCB				
PCB 105	19,1	0,762	12,1	0,447
PCB 114	< 1,36	< 0,054	1,51	0,056
PCB 118	51,5	2,06	62,7	2,32
PCB 123	< 1,58	< 0,063	< 0,77	< 0,029
PCB 156	< 10,7	< 0,426	< 12,4	< 0,460
PCB 157	< 9,96	< 0,398	< 11,3	< 0,418
PCB 167	< 10,2	< 0,406	< 11,7	< 0,431
PCB 189	< 11,2	< 0,449	< 7,86	< 0,291
TEQ 12 WHO PCB excl. LOQ [a]	0,128	0,0051	0,129	0,0048
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,134	0,0053	0,135	0,0050
TEQ 12 WHO PCB incl. LOQ [c]	0,140	0,0056	0,142	0,0052
Recovery Rates	%		%	
13C12-TetraCB(#81)	77		67	
13C12-TetraCB(#77)	81		71	
13C12-PentaCB(#123)	58		86	
13C12-PentaCB(#118)	55		83	
13C12-PentaCB(#114)	62		71	
13C12-PentaCB(#105)	45		64	
13C12-PentaCB(#126)	90		89	
13C12-HexaCB(#167)	77		91	
13C12-HexaCB(#156)	74		85	
13C12-HexaCB(#157)	76		90	
13C12-HexaCB(#169)	82		93	
13C12-HeptaCB(#189)	84		123	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 36: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B5 6N2670.029		B6 6N2670.030	
Fat content [%]	4,1		3,9	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	0,66	0,027	1,19	0,046
PCB 81	0,18	0,007	0,24	0,009
PCB 126	1,09	0,044	0,92	0,036
PCB 169	0,30	0,012	0,33	0,013
Mono-ortho PCB				
PCB 105	10,5	0,426	16,4	0,633
PCB 114	1,99	0,081	< 1,47	< 0,057
PCB 118	48,5	1,97	67,7	2,61
PCB 123	< 0,28	< 0,011	< 1,79	< 0,069
PCB 156	< 8,91	< 0,362	< 7,42	< 0,287
PCB 157	< 7,98	< 0,324	< 7,74	< 0,299
PCB 167	< 8,65	< 0,351	< 6,58	< 0,254
PCB 189	< 9,23	< 0,375	< 11,2	< 0,431
TEQ 12 WHO PCB excl. LOQ [a]	0,119	0,0048	0,104	0,0040
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,124	0,0050	0,109	0,0042
TEQ 12 WHO PCB incl. LOQ [c]	0,129	0,0052	0,114	0,0044
Recovery Rates	%		%	
13C12-TetraCB(#81)	76		54	
13C12-TetraCB(#77)	80		65	
13C12-PentaCB(#123)	69		60	
13C12-PentaCB(#118)	65		59	
13C12-PentaCB(#114)	69		67	
13C12-PentaCB(#105)	75		55	
13C12-PentaCB(#126)	95		103	
13C12-HexaCB(#167)	85		61	
13C12-HexaCB(#156)	83		54	
13C12-HexaCB(#157)	89		50	
13C12-HexaCB(#169)	98		128	
13C12-HeptaCB(#189)	88		63	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 37: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B7 6N2670.031		B8 6N2670.032	
Fat content [%]	4,2		4,4	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	0,84	0,036	1,16 ^d	0,051 ^d
PCB 81	0,25	0,010	0,62 ^d	0,027 ^d
PCB 126	1,20	0,051	4,46 ^d	0,195 ^d
PCB 169	0,39	0,016	0,92 ^d	0,040 ^d
Mono-ortho PCB				
PCB 105	16,7	0,703	72,4 ^d	3,16 ^d
PCB 114	< 2,78	< 0,117	3,72 ^d	0,163 ^d
PCB 118	60,7	2,56	316 ^d	13,8 ^d
PCB 123	< 3,77	< 0,159	3,40 ^d	0,148 ^d
PCB 156	< 9,96	< 0,420	27,6 ^d	1,21 ^d
PCB 157	< 8,53	< 0,359	11,4 ^d	0,500 ^d
PCB 167	< 9,35	< 0,394	13,9 ^d	0,607 ^d
PCB 189	< 12,3	< 0,517	< 5,75 ^d	< 0,251 ^d
TEQ 12 WHO PCB excl. LOQ [a]	0,132	0,0056	0,517 ^d	0,0226 ^d
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,138	0,0058	0,517 ^d	0,0226 ^d
TEQ 12 WHO PCB incl. LOQ [c]	0,144	0,0061	0,517 ^d	0,0226 ^d
Recovery Rates	%		%	
13C12-TetraCB(#81)	78		67	
13C12-TetraCB(#77)	82		80	
13C12-PentaCB(#123)	82		98	
13C12-PentaCB(#118)	95		100	
13C12-PentaCB(#114)	104		102	
13C12-PentaCB(#105)	105		100	
13C12-PentaCB(#126)	61		69	
13C12-HexaCB(#167)	107		91	
13C12-HexaCB(#156)	115		102	
13C12-HexaCB(#157)	126		98	
13C12-HexaCB(#169)	102		131	
13C12-HeptaCB(#189)	164		86	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 38: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B9 6N2670.033		B13 6N2670.034	
Fat content [%]	3,5		3,8	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	0,75	0,027	0,98	0,037
PCB 81	0,38	0,013	0,27	0,010
PCB 126	1,88	0,066	1,71	0,065
PCB 169	0,47	0,016	0,41	0,015
Mono-ortho PCB				
PCB 105	18,2	0,643	27,9	1,06
PCB 114	< 1,42	< 0,050	2,07	0,079
PCB 118	87,1	3,08	120	4,56
PCB 123	< 1,49	< 0,053	2,76	0,105
PCB 156	< 11,0	< 0,390	12,9	0,491
PCB 157	< 9,69	< 0,343	4,84	0,184
PCB 167	< 11,1	< 0,392	9,23	0,351
PCB 189	< 4,68	< 0,166	3,65	0,139
TEQ 12 WHO PCB excl. LOQ [a]	0,203	0,0072	0,200	0,0076
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,209	0,0074	0,200	0,0076
TEQ 12 WHO PCB incl. LOQ [c]	0,215	0,0076	0,200	0,0076
Recovery Rates	%		%	
13C12-TetraCB(#81)	83		109	
13C12-TetraCB(#77)	89		113	
13C12-PentaCB(#123)	105		104	
13C12-PentaCB(#118)	99		100	
13C12-PentaCB(#114)	101		118	
13C12-PentaCB(#105)	97		96	
13C12-PentaCB(#126)	96		117	
13C12-HexaCB(#167)	111		78	
13C12-HexaCB(#156)	116		93	
13C12-HexaCB(#157)	107		93	
13C12-HexaCB(#169)	100		120	
13C12-HeptaCB(#189)	105		98	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 39: Results of the analysis of milk samples for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name GfA Sample No.	B14 6N2670.035		B15 6N2670.036	
Fat content [%]	3,0		3,6	
Unit	pg/g fat-weight	pg/g fresh-weight	pg/g fat-weight	pg/g fresh-weight
WHO-PCB				
Non-ortho PCB				
PCB 77	1,08	0,032	0,80	0,029
PCB 81	0,38	0,011	0,29	0,010
PCB 126	1,76	0,052	1,38	0,049
PCB 169	0,57	0,017	0,42	0,015
Mono-ortho PCB				
PCB 105	27,2	0,805	22,3	0,792
PCB 114	< 2,00	< 0,059	< 2,68	< 0,095
PCB 118	95,9	2,84	99,1	3,53
PCB 123	< 2,49	< 0,074	< 3,38	< 0,120
PCB 156	14,5	0,430	10,3	0,367
PCB 157	< 2,43	< 0,072	< 6,49	< 0,231
PCB 167	7,79	0,230	< 6,32	< 0,225
PCB 189	< 6,73	< 0,199	< 9,14	< 0,325
TEQ 12 WHO PCB excl. LOQ [a]	0,202	0,0060	0,160	0,0057
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,203	0,0060	0,163	0,0058
TEQ 12 WHO PCB incl. LOQ [c]	0,205	0,0061	0,166	0,0059
Recovery Rates	%		%	
13C12-TetraCB(#81)	88		106	
13C12-TetraCB(#77)	91		99	
13C12-PentaCB(#123)	86		71	
13C12-PentaCB(#118)	84		73	
13C12-PentaCB(#114)	93		89	
13C12-PentaCB(#105)	84		69	
13C12-PentaCB(#126)	100		103	
13C12-HexaCB(#167)	72		69	
13C12-HexaCB(#156)	83		75	
13C12-HexaCB(#157)	82		71	
13C12-HexaCB(#169)	112		107	
13C12-HeptaCB(#189)	115		58	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

Tab. 40: Results of the analysis of a milk sample for PCBs; the results refer to the fat-weight and to the fresh-weight

Original Sample Name	B17	
GfA Sample No.	6N2670.037	
Fat content [%]	4,6	
Unit	pg/g fat-weight	pg/g fresh-weight
WHO-PCB		
Non-ortho PCB		
PCB 77	1,01	0,046
PCB 81	0,27	0,012
PCB 126	1,30	0,059
PCB 169	0,38	0,017
Mono-ortho PCB		
PCB 105	26,9	1,22
PCB 114	< 3,48	< 0,158
PCB 118	95,7	4,35
PCB 123	< 4,18	< 0,190
PCB 156	14,0	0,637
PCB 157	< 6,88	< 0,313
PCB 167	9,14	0,415
PCB 189	< 9,94	< 0,452
TEQ 12 WHO PCB excl. LOQ [a]	0,153	0,0070
TEQ 12 WHO PCB incl. 1/2 LOQ [b]	0,156	0,0071
TEQ 12 WHO PCB incl. LOQ [c]	0,159	0,0073
Recovery Rates	%	
13C12-TetraCB(#81)	69	
13C12-TetraCB(#77)	76	
13C12-PentaCB(#123)	102	
13C12-PentaCB(#118)	115	
13C12-PentaCB(#114)	115	
13C12-PentaCB(#105)	115	
13C12-PentaCB(#126)	62	
13C12-HexaCB(#167)	110	
13C12-HexaCB(#156)	127	
13C12-HexaCB(#157)	122	
13C12-HexaCB(#169)	110	
13C12-HeptaCB(#189)	159	

< : Concentration below the indicated limit of quantification (LOQ)

[a] : TE-value calculated by including the detected PCDF/D congeners only

[b] : TE-value calculated by including the not detected PCDF/D congeners also by taking half of their detection limit (LOD)

[c] : TE-value calculated by including the not detected PCDF/D congeners also by taking the full value of their detection limit (LOD)

[d] : Results verified by a duplicate analysis

December 15, 2006

Dr. R. Grümping

Dipl.-Chem. W. Sünderhauf

Remark: The test results relate only to the items tested. Extracts of the report shall not be reproduced without written approval of the GfA mbH.

Environmental Protection Agency (EPA)
Mr. Colman Concannon
McCumiskey House
Richview
Clonskeagh Road
Dublin 14

Ireland

December 15, 2006

Our ref.:

61243-004

 P02-139-Kr
Please include in all correspondences

Your ref.: ./.
Project manager: Dr. R. Grümping
Direct dial: -154

**Analysis of 37 cow's milk samples for PCDD/Fs and PCBs;
Your order PO 008889 dated July 27, 2006**

Dear Mr. Concannon,

Enclosed please find our test report concerning the investigations mentioned above

If you have any questions please don't hesitate to contact us.

Best regards

Dr. R. Grümping