

Enumeration of total bacterial count in raw milk - FC/BC interlaboratory studies August - MS 9

		Stain Enzym BZ				BCS-Standard		LED Set-Point	Signal-width	Noise level	PMT level	MS8A			MS8B			MS9A			MS9B/C			Controlmilk CM I			Rel.	mean		
		Batch-	No.	Batch-	No.	Batch-	No.					% sign.	% Imp.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% mean	9A/ 9B	% calc.
instr. No.		Batch-	No.	Batch-	No.	Batch-	No.	% sign.	% Imp.	LED Set-Point	Signal-width	Noise level	PMT level	Imp.	VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% mean	9A/ 9B	% calc.
		Microsph	Enzyme	IBC-Std																										
1	BS 02	24040100	24040101	6013946	100%	108%				29	10			146	3,80	93%	390	3,70	87%	129	3,60	84%	383	5,00	85%	164	4,90	100%	2,97	87%
2	BS 02-C	24040100	24040101	6013946	100%	108%				29	9			"136	2,70		"369	3,30		"879	2,60	96%	"896	0,70	81%					89%
3	BC 112/I													173	4,08	90%	476	1,81	83%	180	3,65	96%	516	1,83	93%	196	2,00	103%	2,87	90%
4	FC 71	25020048	24110274	6015612	100%	94%	736	26	6	674										141	4,9	92%	427	1,2	95%	162	3,51	99%	3,03	93%
5	BS 02 old	24040100	24040101	6013946	100%	108%														"872	1,30	97%	"806	2,60	90%					93%
6	FC 74	25020023	25010005	6015612	95%	93%	855	27	6	551	152	3,3	97%	407	3,3	90%	143	3,6	93%	432	2,5	96%	156	3,5	95%	3,02	95%	3,02	94%	
7	FC 166	24100238	25010005	6015038	105%	85%	795	27	6	520	149	4,40	95%	424	1,70	94%	143	3,50	94%	433	2,50	96%	157	4,88	96%	3,02	95%	3,02	95%	
8	FC 81	25020023	25020020	6015433	103%	84%	819	26	6	542	"143	4,3	96%	"407	3,1	96%	150	3,6	98%	420	2,3	93%	152	4,2	92%	2,80	96%	2,80	96%	
9	FC 151	556688	556746	557058	98%	84%	842	30	6	513										151	14,57	99%	420	1,53	93%	"134	6,3	82%	2,78	96%
10	FC 152/3A	23020044	23010004	6010758	97%	94%	900	26	6	510	153	2,12	97%	444	3,13	99%	146	8,19	95%	420	1,80	93%	157	1,47	96%	2,88	96%	2,88	96%	
11	FC 21	24110272	24120297	6015612	90%	97%	855	24	8	655	155	2,3	99%	411	3,50	91%	151	5,50	99%	447	3,30	99%	160	3,2	97%	2,96	97%	2,96	97%	
12	FC 152/2B	22020044	23010004	6010758	97%	94%	900	26	6	510										"1113	2,08	97%							97%	
13	FC 152/3B	23020044	23010004	6010758	97%	94%	900	26	6	510										"874	1,5	97%							97%	
14	BS 147	2503071B	2503072B	6014094	93%	105%		28	11								150	1,4	98%	449	1,0	100%	161	6,3	98%	2,99	99%	2,99	99%	
15	FC 149	25020048	25050113	6016012	122%	135%	510	20	6	709	156	3,9	99%	449	1,6	100%	150	5,1	98%	445	2,8	99%	168	1,9	102%	2,97	99%	2,97	99%	
16	FC 30	24110272	24120297	6015182	102%	103%	547	28	5		151	3,95	96%	417	3,61	93%	158	3,82	103%	469	2,55	104%	168	2,30	102%	2,97	99%	2,97	99%	
17	FC 1	24070150	24060142	6015612	98%	97%	867	27	9	584	156	2,2	99%	446	2,33	99%	149	6,38	97%	455	2,71	101%	160	5,8	97%	3,05	99%	3,05	99%	
18	FC 152/2A	23020044	23010004	6010758	97%	94%	900	26	6	510	147	2,9	94%	430	4,6	95%	160	8,9	105%	470	6,5	104%	168	1,9	102%	2,94	99%	2,94	99%	
19	FC 32	24100238	25010005	6014351	98%	92%	760	27	10	648	152	4,5	97%	443	4,2	98%	159	3,6	104%	450	1,7	100%	156	4,4	95%	2,83	100%	2,83	100%	
20	FC 63	25020023	25020046	6015612	105%	95%	748	28	6	634	156	2,5	99%	451	0,8	100%	152	1,8	99%	454	0,9	101%	161	8,7	98%	2,98	100%	2,98	100%	
21	FC 85	24112272	24120297	6015512	100%	91%	1161	30	7	572	156	4,20	99%	451	2,05	100%	152	3,98	99%	457	1,30	101%	162	2,40	98%	3,00	100%	3,00	100%	
22	FC 96	24110274	25020023	6015295	98%	92%	743	26,7	5	553	158	2,80	101%	446	3,10	99%	158	3,90	103%	439	2,70	97%	159	5,40	97%	2,78	100%	2,78	100%	
23	FC 6	25020023	24090204	6014981	97%	94%	515	24	6	577	159	5,7	101%	456	2,3	101%	152	4,9	99%	446	2,7	99%	162	2,4	99%	2,93	100%	2,93	100%	

instr. No.	Stain Enzym BZ				BCS-Standard		LED Set-Point	Signal-width	Noise level	PMT level	MS8A			MS8B			MS9A			MS9B/C			Controlmilk CM I			Rel.	mean
	Batch-	No.	Batch-	No.	Batch-	No.					Imp.	VK%`r	%calc.	Imp.	VK%`r	%calc.	Imp.	VK%`r	%calc.	Imp.	VK%`r	%calc.	Imp.	VK%`r	%mean	9A/ 9B	%calc.
	Microsph	Enzyme	IBC-Std																								
24	FC 120	24060137	24060137	6015612	93%	99%	894	29	10	850	155	2,92	99%	455	2,56	101%	154	3,27	101%	452	2,56	100%	169	3,51	103%	2,93	100%
25	FC 2	25020023	25020020	6014981	97%	93%	754	23	6	532	159	7,30	101%	456	2,80	101%	154	4,17	101%	440	3,27	98%	162	6,65	99%	2,86	100%
26	FC 5	25020023	25020020	6014981	95%	92%	760	24	6	649	157	4,02	100%	460	2,66	102%	153	5,72	100%	448	2,14	99%	164	4,03	100%	2,94	100%
27	FC 18	24090220	25010005	6014677	103%	95%	510	25	6	542	155	5,45	99%	456	1,60	101%	153	3,58	100%	456	2,67	101%	160	3,68	97%	2,97	100%
28	FC 8	24100238	24100267	6016012	103%	89%	690	26	6	637	158	5,10	100%	457	2,00	101%	152	3,80	99%	454	3,00	101%	165	2,70	100%	3,00	100%
29	FC 17	241102727	24120297	6015612	103%	98%	950	28	6	520	158	2,0	101%	453	1,3	101%	149	3,3	97%	467	2,8	104%	162	4,2	99%	3,13	101%
30	FC 65	25020023	25020046	6015612		96%	599			601	158	2,60	101%	452	1,20	100%	155	2,06	102%	452	0,58	100%	169	3,03	103%	2,91	101%
31	FC 4	25020023	25020020	6014981	95%	95%	650	25	6	608	160	3,7	102%	462	2,1	103%	153	5,1	100%	450	2,7	100%	166	7,1	101%	2,95	101%
32	FC 38-I	25020023	25050113	6015807	97%	90%	575	25	5	519	156	3,90	99%	457	1,50	101%	153	2,90	100%	467	1,90	104%	162	3,60	99%	3,05	101%
33	FC 84	24112272	24120297	6015512	95%	90%	961	28	6	545	157	4,91	100%	453	2,20	100%	157	2,20	103%	462	1,70	102%	167	4,20	102%	2,94	101%
34	FC 90	23090191	24110274	6013067	105%	98%	912	31	8	606	165	5,15	105%	438	7,66	97%	157	4,55	103%	460	2,29	102%	174	2,89	106%	2,93	102%
35	FC 131	24110274	25020023	6015295	90%	95%	803	25	8	579	157	3,60	100%	478	3,40	106%	154	4,2	101%	454	2,3	101%	165	3,30	101%	2,95	102%
36	FC 13	25020048	25020046	6015612	97%	99%	765	27	6	490	162	3,86	103%	458	3,87	102%	155	3,02	101%	458	2,28	102%	164	5,26	100%	2,95	102%
37	BC 109/I	03724F-440	03771-2-392	1224C							203	1,86	105%	531	3,10	93%	200	2,87	106%	577	1,93	104%	190	2,79	99%	2,88	102%
38	FC 19/I	25020048	25040085	6015119	100%	95%	800	30	8	627	158	4,70	101%	456	2,40	101%	157	4,60	103%	478	2,30	106%	155	5,50	94%	3,04	103%
39	FC 11	25020023	24100267	6015433	93%	112%		24	6	555	171	5,3	109%	439	2,6	97%	151	6,2	99%	481	2,4	107%	148	6,0	90%	3,19	103%
40	FC 158										154	2,49	98%	476	0,60	106%	166	1,97	108%	453	1,69	100%	165	1,82	101%	2,73	103%
41	FC 97	22100252	24010011	6015182	98%	92%	562	35	13	720							157	3,78	103%	469	1,69	104%	185	2,68	113%	2,99	103%
42	FC 39	25020023	24110274	6015577	95%	97%	860	24	7	651	159	4,7	101%	465	5,1	103%	160	5,3	104%	475	1,9	105%	164	6,4	100%	2,98	103%
43	FC 9	24090220	24110274	6014701	95%	96%	695	26	5		163	3,40	104%	471	2,30	105%	157	4,27	102%	473	2,40	105%	172	2,30	104%	3,02	104%
44	FC 107	24090220	25010005	6014981	89%	92%		26	7	581	161	2,92	103%	471	1,40	104%	162	3,65	106%	475	1,92	105%	173	2,97	105%	2,93	105%
45	FC 94	24110274	25020023	6015295	95%	96%	1008	26	7	572	158	2,6	101%	487	3,0	108%	161	4,4	105%	475	2,1	105%	168	5,2	102%	2,95	105%
46	BC 109/II	03724F-440	03771-2-392	1224C							204	1,97	106%	571	1,70	100%	204	3,70	109%	588	1,10	106%	187	1,00	98%	2,88	105%
47	FC 39B	25020023	24110274	6015577	95%	97%	860	24	7	651				1160,4	1,67	105%											105%
48	FC 68	23090191	24030067	6013067		115%					165	4,39	105%	460	2,35	102%	169	2,75	110%	466	3,29	103%	176	8,64	107%	2,76	105%

instr. No.		Stain Enzym BZ				BCS-Standard		LED Set-Point	Signal-width	Noise level	PMT level	MS8A			MS8B			MS9A			MS9B/C			Controlmilk CM I			Rel.	mean
		% sign.	% Imp.	Imp.	VK%`r	% calc.	Imp.					VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% calc.	Imp.	VK%`r	% mean	9A/ 9B	% calc.				
		Microsph	Enzyme	IBC-Std																								
49	FC12	25020023	24100267	6015433	93%	89%	605	26	7	530	161	2,52	103%	492	2,30	109%	158	7,30	103%	479	1,23	106%	176	2,63	107%	3,03	105%	
50	FC 19/II	25020048	25040085	6015119	103%	94%	770	27	8	564	165	4,6	105%	478	2,3	106%	161	3,6	105%	491	0,8	109%	163	1,9	99%	3,04	106%	
51	FC 95	25020023	24110274	6014701	95%	99%	758	26	6	553	165	3,7	105%	487	1,6	108%	163	3,9	106%	486	0,8	108%	168	3,7	102%	2,99	107%	
52	FC 115	556688	556746	557058	100%	91%	947	27	6	524							173	2,7	113%	477	2,3	106%	"130	4,7	80%	2,76	110%	
53	FC 73	24110272	24120297	6015038	100%	94%	712	26	7	590	"176	3,8	112%	478	3,3	106%	170	5,3	111%	499	3,0	111%	"188	5,1	115%	2,93	110%	
54	FC 126/I										"201	4,50	110%	"552	1,00	111%	174	4,20	114%	510	2,40	113%	172	8,00	105%	2,93	112%	
55	FC 72	24070150	24080192	60102995	100%	101%	751	26	7	514	170	3,90	108%	483	11,80	107%	"181	5,40	118%	"517	2,30	115%	"197	5,30	119%		112%	
56	FC 126/II																			1202,4	1,60	115%					115%	
57	FC 41	25020048	25040085	6015807	105%	96%	746	30	9	601													160	1,60	98%			
58	FC 42	25020048	25040085	6015807	103%	105%	685	29	7	569													175	4,00	107%			
59	FC 43	25020048	25040085	6015807	103%	97%	645	31	11	745													162	5,40	99%			
60	FC 44	25020048	25040085	6015807	100%	101%	734	26	6	633													162	4,20	99%			
Mean		BSC-FC				98%	97%	777	27	7	583	158	100%		454	101%		155	101%		457	101%		164	100%		2,96	99%
Median												158			456			154			455			164			2,95	
VK(%)`r`												3,8%			2,8%			4,2%			2,3%			4,2%			0,54	
s-R												5,4			22,4			8,0			22,7			6,15			2,84	
VK(%)`R`												3,4%			4,9%			5,2%			5,0%			3,8%			0,96	
mean		BC -										194	100%		526	92%		195	104%		560	101%		191			2,88	99%
VK(%)`r`												2,6%			2,2%			3,4%			1,6%			1,9%				
VK(%)`R`												9,2%			9,1%			6,7%			6,9%							

VK(%)`r` : Repeatability (Standard deviation of repeatability/arithm mean *100)
s-R : Standard deviation of reproducibility without outliers
VK(%)`R` : Reproducibility (Standard deviation of reproducibility/arithm. mean*100)
KM (CM) : "Controlmilk" (Raw milk; enriched with definite Bacteria cultures)
% signal = deviation to the BCS - Signal Mean Average
% imp. = deviation to the BCS - Standard count average

calc.values	FC-imp		BC-IBC	
MS8A	157	±10%	193	+/-15%
Rel.8B/8A	2,87	475	2,97	574
MS8C	1102	±10%		
MS9A	153	±10%	188	±15%
Rel.9B/9A	2,95	451	2,95	555
MS9C	900 /104	±10%	1.107	

instr. No.	Stain Enzym BZ				BCS-Standard		LED Set-Point	Signal-width	Noise level	PMT level	MS8A			MS8B			MS9A			MS9B/C			Controlmilk CM I			Rel.	mean		
	Batch-	No.	Batch-	No.	% sign.	% Imp.					VK%	%`r	% calc.	VK%	%`r	% calc.	VK%	%`r	% calc.	VK%	%`r	% calc.	Imp.	VK%	%`r	% mean		9A/ 9B	% calc.
	Microsph	Enzyme	IBC-Std																										
Staining solution	24040100	n =	3	100%	108%		29	10		146		93%	390		87%	129		92%	383		85%	164		100%	3.0				
Staining solution	25020048	n =	6	104%	102%	721	27	7	611	160		102%	460		102%	153		100%	460		102%	162		99%	3.0				
Staining solution	25020023	n =	14	96%	95%	720	25	6	582	159		101%	457		101%	154		100%	456		101%	162		99%	3.0				
Staining solution	24100238	n =	3	102%	89%	748	27	7	602	153		97%	441		98%	151		99%	446		99%	159		97%	2.9				
Staining solution	556688	n =	2	99%	88%	895	29	6	519							162		106%	449		99%			81%	2.8				
Staining solution	23020044	n =	3	97%	94%	900	26	6	510	150		96%	437		97%	153		100%	445		98%	163		99%	2.9				
Staining solution	24110272	n =	3	97%	98%	705	26	7	623	153		102%	435		97%	160		104%	472		105%	164		105%	3.0				
Staining solution	22020044	n =	1	97%	94%	900	26	6	510									97%											
Staining solution	2503071B	n =	1	93%	105%		28	11								150		98%	449		100%	161		98%	3.0				
Staining solution	24070150	n =	2	99%	99%	809	27	8	549	163		104%	465		103%	149		108%	455		108%	160		108%	3.1				
Staining solution	24112272	n =	2	97%	91%	1061	29	7	559	156		100%	452		100%	155		101%	459		102%	164		100%	3.0				
Staining solution	24110274	n =	3	94%	94%	851	26	7	568	158		101%	470		104%	158		103%	456		101%	164		100%	2.9				
Staining solution	24060137	n =	1	93%	99%	894	29	10	850	155		99%	455		101%	154		101%	452		100%	169		103%	2.9				
Staining solution	24090220	n =	3	96%	94%	603	26	6	562	160		102%	466		103%	158		103%	468		104%	168		102%	3.0				
Staining solution	241102727	n =	1	103%	98%	950	28	6	520	158		101%	453		101%	149		97%	467		104%	162		99%	3.1				
Staining solution	23090191	n =	2	105%	107%	912	31	8	606	165		105%	449		100%	163		107%	463		103%	175		107%	2.8				
Staining solution	03724F-440	n =	2							204		106%	551		96%	202		107%	582		105%	189		99%	2.9				
Staining solution	22100252	n =	1	98%	92%	562	35	13	720							157		103%	469		104%	185		113%	3.0				
Enzym-Charge	24040101	n =	3	100%	108%		29	10		146		93%	390		87%	129		92%	383		85%	164		100%	3.0				
Enzym-Charge	24110274	n =	6	97%	97%	804	26	7	627	163		104%	465		104%	156		102%	464		103%	168		102%	3.0				
Enzym-Charge	25010005	n =	5	98%	91%	730	26	7	568	154		98%	440		98%	152		99%	449		100%	160		98%	3.0				
Enzym-Charge	25020020	n =	4	97%	91%	746	25	6	583	159		100%	459		100%	152		100%	439		97%	161		98%	2.9				
Enzym-Charge	556746	n =	2	99%	88%	895	29	6	519							162		106%	449		99%			81%	2.8				
Enzym-Charge	23010004	n =	4	97%	94%	900	26	6	510	150		96%	437		97%	153		100%	445		98%	163		99%	2.9				
Enzym-Charge	24120297	n =	6	98%	96%	864	27	7	576	155		101%	444		98%	156		102%	467		103%	164		102%	3.0				
Enzym-Charge	2503072B	n =	1	93%	105%		28	11								150		98%	449		100%	161		98%	3.0				
Enzym-Charge	25050113	n =	2	110%	113%	543	23	6	614	156		99%	453		101%	152		99%	456		101%	165		100%	3.0				
Enzym-Charge	24060142	n =	1	98%	97%	867	27	9	584	156		99%	446		99%	149		97%	455		101%	160		97%	3.1				
Enzym-Charge	25020046	n =	3	101%	97%	704	28	6	575	159		101%	454		101%	154		101%	455		101%	165		100%	2.9				
Enzym-Charge	25020023	n =	3	94%	94%	851	26	7	568	158		101%	470		104%	158		103%	456		101%	164		100%	2.9				
Enzym-Charge	24090204	n =	1	97%	94%	515	24	6	577	159		101%	456		101%	152		99%	446		99%	162		99%	2.9				
Enzym-Charge	24060137	n =	1	93%	99%	894	29	10	850	155		99%	455		101%	154		101%	452		100%	169		103%	2.9				
Enzym-Charge	24100267	n =	3	96%	97%	648	25	6	574	163		104%	463		103%	154		100%	471		104%	163		99%	3.1				
Enzym-Charge	03771-2-392	n =	2							204		106%	551		96%	202		107%	582		105%	189		99%	2.9				
Enzym-Charge	25040085	n =	3	103%	95%	772	29	8	597	161		103%	467		104%	159		104%	484		107%	159		97%	3.0				
Enzym-Charge	24010011	n =	1	98%	92%	562	35	13	720							157		103%	469		104%	185		113%	3.0				
Enzym-Charge	24030067	n =	1		115%					165		105%	460		102%	169		110%	466		103%	176		107%	2.8				
Enzym-Charge	24080192	n =	1	100%	101%	751	26	7	514	170		108%	483		107%			118%						119%					
Enzym-Charge		n =	0																										
BZ-Charge	6013946	n =	3	100%	108%		29	10		146		93%	390		87%	129		92%	383		85%	164		100%	3.0				
BZ-Charge	6015612	n =	9	97%	96%	808	27	7	618	156		100%	442		98%	150		98%	449		100%	163		99%	3.0				
BZ-Charge	6015038	n =	2	103%	90%	754	27	7	555	149		103%	451		100%	157		102%	466		103%	157		105%	3.0				
BZ-Charge	6015433	n =	3	96%	95%	712	25	6	542	166		102%	466		101%	153		100%	460		102%	159		97%	3.0				
BZ-Charge	557058	n =	2	99%	88%	895	29	6	519							162		106%	449		99%			81%	2.8				
BZ-Charge	6010758	n =	4	97%	94%	900	26	6	510	150		96%	437		97%	153		100%	445		98%	163		99%	2.9				
BZ-Charge	6014094	n =	1	93%	105%		28	11								150		98%	449		100%	161		98%	3.0				
BZ-Charge	6016012	n =	2	112%	112%	600	23	6	673	157		100%	453		101%	151		99%	449		100%	166		101%	3.0				
BZ-Charge	6015182	n =	2	100%	98%	555	32	9	720	151		96%	417		93%	158		103%	469		104%	177		107%	3.0				
BZ-Charge	6014351	n =	1	98%	92%	760	27	10	648	152		97%	443		98%	159		104%	450		100%	156		95%	2.8				
BZ-Charge	6015512	n =	2	97%	91%	1061	29	7	559	156		100%	452		100%	155		101%	459		102%	164		100%	3.0				
BZ-Charge	6015295	n =	3	94%	94%	851	26	7	568	158		101%	470		104%	158		103%	456		101%	164		100%	2.9				
BZ-Charge	6014981	n =	5	95%	93%	670	24	6	589	159		101%	461		102%	155		101%	452		100%	165		101%	2.9				
BZ-Charge	6014677	n =	1	103%	95%	510	25	6	542	155		99%	456		101%	153		100%	456		101%	160		97%	3.0				
BZ-Charge	6015807	n =	2	101%	93%	661	28	7	560	156		99%	457		101%	153		100%	467		104%	161		98%	3.1				
BZ-Charge	6013067	n =	2	105%	107%	912	31	8	606	165		105%	449		100%	163		107%	463		103%	175		107%	2.8				
BZ-Charge	1224C	n =	2							204		106%	551																