



Assessment of Lab Performance and Analytical  
Equivalence in Milk Testing in North America

ICAR, June 16, 2008  
Niagara Falls, New York



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(forage analysis, Johnes screening, water analysis, component payment testing, drug residues, bacteria, added water, vet services, nutritional consulting, etc.)



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## Proficiency Testing Programs



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## Proficiency Testing - Schedules and Samples



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<u>Sample</u>	<u>Fat (ref)</u>	<u>Fat (IR)</u>	<u>Diff.</u>
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3	3.882	3.910	0.028
4	3.898	3.910	0.012
5	3.998	4.035	0.037
6	4.006	4.040	0.034
7	4.063	4.105	0.042
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Date	MD
Jan 2008	-0.020
Feb 2008	0.015
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Apr 2008	-0.031
May 2008	0.024
<u>Jun 2008</u>	<u>0.011</u>

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<u>Jun 2008</u>	<u>0.011</u>
RMD	0.004



## Canadian Program - Individual Data, Tabular Presentation

### Fat Infrared Results

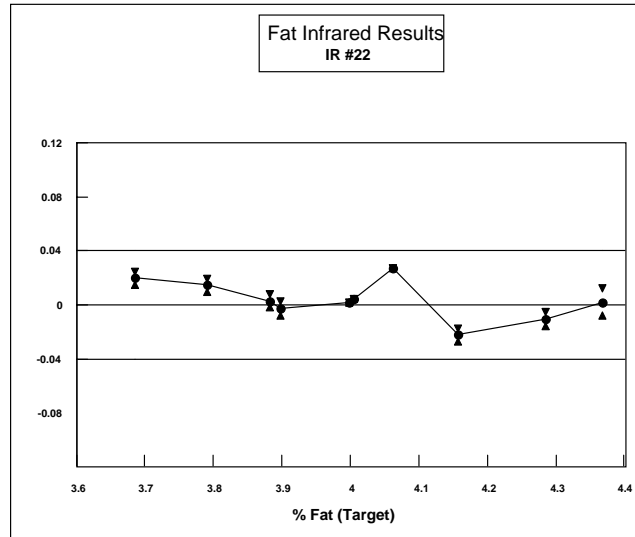
### IR #22

### May 2008

SAMPLE	TARGET	REP. 1	REP. 2	MEAN	RANGE	SD	RES.
MS-2	3.685	3.710	3.700	3.705	0.010	0.007	0.020
MS-8	3.790	3.810	3.800	3.805	0.010	0.007	0.015
MS-6	3.882	3.880	3.890	3.885	0.010	0.007	0.003
MS-9	3.898	3.890	3.900	3.895	0.010	0.007	-0.003
MS-7	3.998	4.000	4.000	4.000	0.000	0.000	0.002
MS-10	4.006	4.010	4.010	4.010	0.000	0.000	0.004
MS-4	4.063	4.090	4.090	4.090	0.000	0.000	0.027
MS-5	4.157	4.130	4.140	4.135	0.010	0.007	-0.022
MS-3	4.286	4.270	4.280	4.275	0.010	0.007	-0.010
MS-1	4.368	4.380	4.360	4.370	0.020	0.014	0.002
						MD	0.004
						SDD	0.014
						SDA	0.007



## Canadian Program - Individual Data, Graphical Presentation



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## Canadian Program - Summary Table

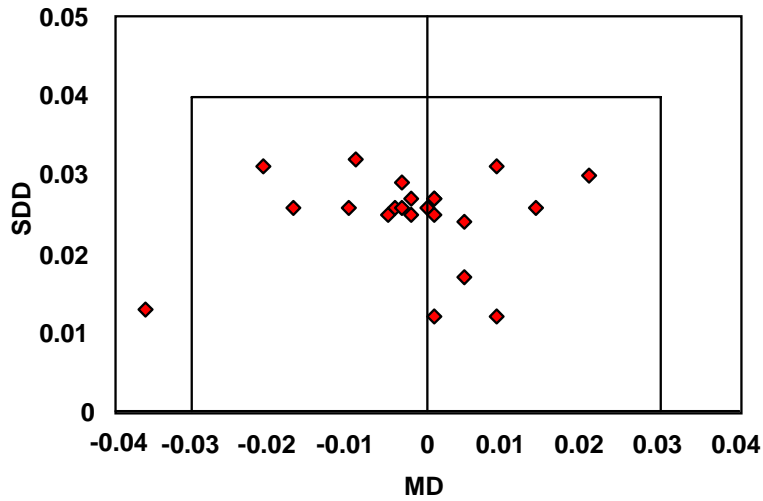
### Protein Infrared Results

IR #	MD	SDD	SDA	S
IR #2	-0.036	0.013	0.009	0.023
IR #14	-0.021	0.031	0.006	0.022
IR #6	-0.017	0.026	0.009	0.019
IR #13	-0.010	0.026	0.005	0.016
IR #19	-0.009	0.032	0.015	0.021
IR #10	-0.005	0.025	0.006	0.015
IR #3	-0.004	0.026	0.009	0.016
IR #17	-0.003	0.029	0.003	0.017
IR #8	-0.003	0.026	0.006	0.016
IR #11	-0.002	0.027	0.007	0.016
IR #22	-0.002	0.025	0.007	0.015
IR #12	0.000	0.026	0.007	0.016
IR #18	0.001	0.027	0.004	0.016
IR #4	0.001	0.027	0.005	0.016
IR #5	0.001	0.025	0.004	0.015
IR #1	0.001	0.012	0.005	0.008
IR #15	0.005	0.024	0.008	0.015
IR #20	0.005	0.017	0.005	0.011
IR #7	0.009	0.031	0.003	0.019
IR #21	0.009	0.012	0.002	0.009
IR #16	0.014	0.026	0.007	0.018
IR #9	0.021	0.030	0.007	0.022
			Mean	0.016

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## Canadian Program - Summary Graph



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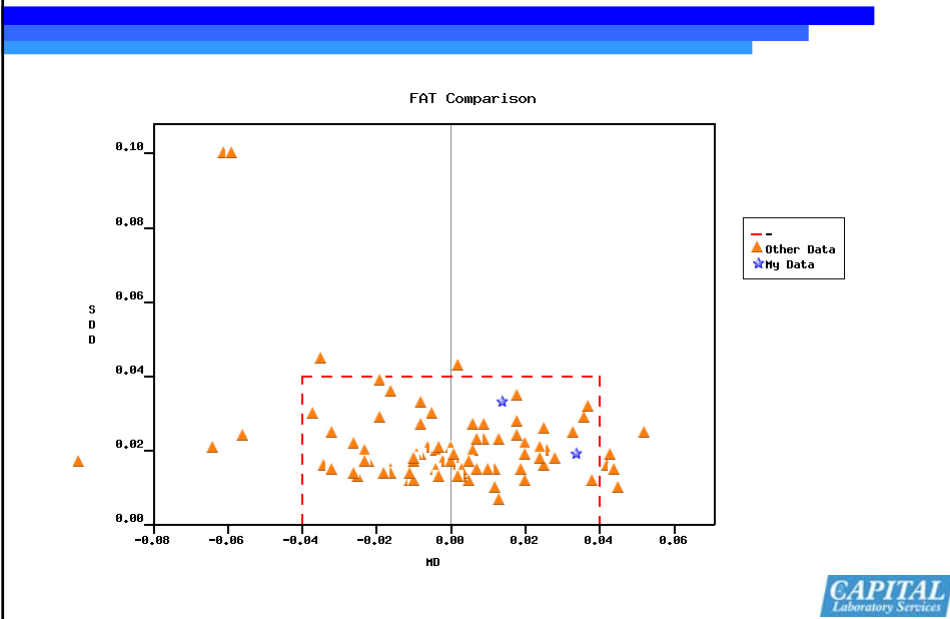
## QCS Program, Individual Data, Tabular Presentation

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Butterfat

Sample Number	Lab/Instrument		Avg Diff	Instr Results		Prec Stats		Accuracy Stats	
	Ref	Inst		Rep1	Rep2	Range	SD	Reps	IR Mean
1	3.557	3.564	0.007	3.56	3.58	0.020	0.014	3.570	0.013
2	3.907	3.909	0.002	3.91	3.90	0.010	0.007	3.905	-0.002
3	2.990	2.990	0.000	3.01	3.03	0.020	0.014	3.020	0.030
4	4.153	4.138	-0.015	4.20	4.20	0.000	0.000	4.200	0.047
5	3.547	3.550	0.003	3.57	3.59	0.020	0.014	3.580	0.033
6	3.797	3.782	-0.015	3.78	3.79	0.010	0.007	3.785	-0.012
7	3.707	3.723	0.016	3.74	3.77	0.030	0.021	3.755	0.048
8	3.223	3.224	0.001	3.26	3.26	0.000	0.000	3.260	0.037
9	3.640	3.649	0.009	3.68	3.67	0.010	0.007	3.675	0.035
10	4.297	4.289	-0.008	4.28	4.27	0.010	0.007	4.275	-0.022
11	4.817	4.800	-0.017	4.75	4.76	0.010	0.007	4.755	-0.062
12	4.370	4.382	0.012	4.40	4.39	0.010	0.007	4.395	0.025
	MD	0.000		SDA	0.006	MD	0.014		
	SDD	0.011				SDD	0.033		

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## QCS Program - Summary Graph



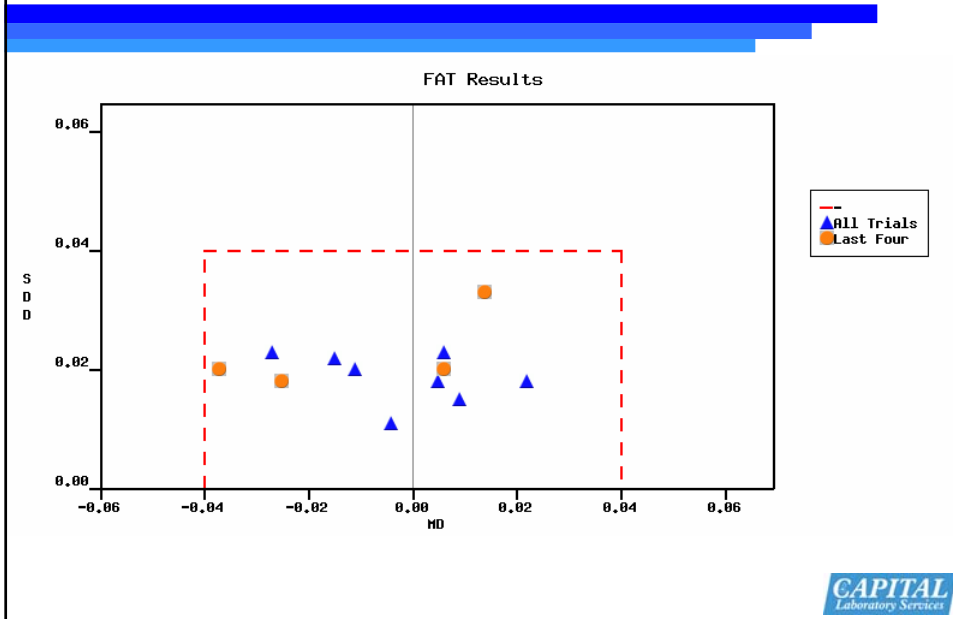
## QCS Program - Historical Data, Tabular Presentation

Month	FAT Results		
	MD	SDD	RMD
Jun	-0.011	0.020	0.002
Jul	0.009	0.015	0.008
Aug	-0.027	0.023	0.004
Sep	-0.004	0.011	0.002
Oct	0.005	0.018	0.002
Nov	0.006	0.023	0.004
Dec	0.022	0.018	0.002
Jan	-0.015	0.022	0.002
Feb	-0.037	0.020	0.004
Mar	0.006	0.020	0.002
Apr	-0.025	0.018	0.007
May	0.014	0.033	0.006

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## QCS Program - Historical Data, Graphical Presentation



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