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Additional Protocol Codes for specific Calibration of the Total Protein Test on the Cedex Bio HT Analyzer

Custom calibration for specific sample types to achieve optimal test accuracy

The biuret assay for determination of the total protein concentration is less sensitive to influencing factors compared to the majority of alternative methods. Nevertheless, there still may be an influence depending on the sample type, especially if there are other reactive ingredients in the sample matrix or if there is one major protein with very special characteristics.

With mixtures of various proteins in a simple buffer matrix, the inaccuracy of the Cedex Total Protein test is usually less than $\pm 5\%$. If a higher systematic inaccuracy is observed with an individual type of samples, then the optimal test accuracy can be achieved with a specific calibration using a solution of a known concentration of the specific protein in the specific sample matrix for the test calibration instead of using the generic Calibrator A Bio. The custom calibrator solution needs a concentration of about 42 g/L protein (in the range of 37 – 50 g/L) determined with a reference method. Using the specific calibration, appropriate custom controls should also be prepared with the same protein sample type.

Additional Total Protein protocol codes for the analyzer can be used like independent tests, enabling the parallel use of specific calibrations for several different sample types on the same instrument.

Required materials on a Cedex Bio HT Analyzer:

- Total Protein Bio HT, 300 tests, mat. no. 06990169001

Optional for generic calibration:

- Calibrator A Bio, 6 x 1 mL, mat. no. 06682189001
- Control A Level 1 Bio, 6 x 1 mL, mat. no. 06682197001
- Control A Level 2 Bio, 6 x 1 mL, mat. no. 06682227001
- Control A Level 3 Bio, 6 x 1 mL, mat. no. 06682545001

or for specific calibration:

- custom calibrator solution of 42 g/L protein (in the range of 37 – 50 g/L)
- custom controls with an appropriate concentration in the test range

Total Protein test settings for the **Cedex Bio HT** Analyzer

Test range	Protocol	Calibrator ID	Controls
Low Range 0.3 – 6 g/L Protein	TP2LB 0-753 v50.1	CAL A 07-1100-4	Dilution 1:10 of Control A Level 1 Bio with water
	TP2L1 0-754 v50.2 *	Custom CALP1 07-1136-5	Custom (0.5 – 5 g/L)
	TP2L2 0-755 v50.2 *	Custom CALP2 07-1137-3	Custom (0.5 – 5 g/L)
	TP2L3 0-756 v50.2 *	Custom CALP3 07-1138-1	Custom (0.5 – 5 g/L)
	TP2L4 0-757 v50.2 *	Custom CALP4 07-1140-3	Custom (0.5 – 5 g/L)
Standard (Bio) 4 – 120 g/L Protein	TP2B 0-748 v50.4	CAL A 07-1100-4	Control A Level 1 Bio Control A Level 2 Bio Control A Level 3 Bio
	TP2B1 0-137 v50.2 *	Custom CALP1 07-1136-5	Custom (6 – 100 g/L)
	TP2B2 0-142 v50.2 *	Custom CALP2 07-1137-3	Custom (6 – 100 g/L)
	TP2B3 0-143 v50.2 *	Custom CALP3 07-1138-1	Custom (6 – 100 g/L)
	TP2B4 0-144 v50.2 *	Custom CALP4 07-1140-3	Custom (6 – 100 g/L)
High, with Pre-Dilution 1:5 40 – 1200 g/L Protein	TP2D 0-795 v3	CAL A 07-1100-4	Control A Level 3 Bio
	TP2D1 0-141 v50.1 *	Custom CALP1 07-1136-5	Custom (50 – 500 g/L)
	TP2D2 0-145 v50.1 *	Custom CALP2 07-1137-3	Custom (50 – 500 g/L)
	TP2D3 0-147 v50.1 *	Custom CALP3 07-1138-1	Custom (50 – 500 g/L)
	TP2D4 0-148 v50.1 *	Custom CALP4 07-1140-3	Custom (50 – 500 g/L)

* Additional protocols provided in this file, not mentioned in the instructions for use.

The additional protocols can be installed from the file package

'TotalProteinBioHT_AddProtocols_v02.zip', which contains the following 18 files:

0-137.bts, 0-141.bts, 0-142.bts, 0-143.bts, 0-144.bts, 0-145.bts, 0-147.bts, 0-148.bts, 0-754.bts, 0-755.bts, 0-756.bts, 0-757.bts, 07-11205.cas, 07-11365.cal, 07-11373.cal, 07-11381.cal, 07-11403.cal, TotalProteinBioHT_AddProtocols_Description.pdf.