Application Note

Transferrin Turbilatex, ChemWell-T, Awareness

(AN-Tf-ChemWell®-T.EN rev 2019.05.27)

For *in vitro* diagnostic device
ENGLISH

General Information

Intended use:
Transferrin Turbilatex is a latex turbidimetric assay **for the quantitative detection of human transferrin (hTf) in human stool samples.**
For professional *in vitro* diagnostic use only.

This assay is simple and widely applicable. Test results aid in a presumptive diagnosis of faecal occult blood (gastrointestinal bleeding).

Transferrin Turbilatex can be performed on every open chemistry analyser. Please follow the subsequent instructions in order to assure performance characteristics as describes in the instructions for use. This instruction has been validated by CerTest BIOTEC S.L Laboratories.

Additionally please read the "Instructions for use" for instructions on operating and programming user defined test.

Reagents:

Materials provided by CerTest BIOTEC:

Reagents	Quantity	Code
Turbidimetric reagents (R1 & R2) 200 Det/kit	R1: 2 vials, 2x15 mL R2: 1 vial, 1x6 mL	TL-022TF01 TL-022TF02
Auxiliary Reagents		
Calibration kit	Calibrator: 6 vials, 6x1 mL.	TL-022TF70, TL-022TF71, TL-022TF72, TL-022TF73, TL-022TF74, TL-022TF75
Controls kit	Control C1, 2 vials, 2x1 mL/vial. Control C2, 2 vials,2x 1 mL/vial.	TL-022TF08 TL-022TF09
Sample diluent kit	4 vials, 4x125 mL/vial	TL-022FB03E
Sample dilutions vials	1x2 mL/vial 1x2 mL/vial	MST-0005MF MST-0009F

Preparation of reagents:

R1 and R2 are ready to use.

Calibrators are ready to use.

Controls are ready to use

Storage and stability

Kit components must be stored at temperature indicated on the label. Do not freeze.

Reagents are stable up to the expiration date printed on the label, always considering that reagent containers must be properly closed to avoid any contamination, must be kept away from the sunlight and conserved at temperature indicated on the label of each reagent.

Specimen:

Collect enough quantity of human stool samples. These samples should be collected in clean and dry containers (no preservatives or transport media). The samples can be stored in the refrigerator (2-8ºC) for 3 days prior to testing. For longer storage, maximum 6 months, the specimen must be kept frozen at -20ºC. In this case, the sample will be totally thawed, and brought to room temperature (15-30ºC) before testing. Freezing and thawing cycles are not recommended. Homogenise stool samples as thoroughly as possible prior to preparation.

The sample dilution vial with diluted sample can be stored for 7 days in the refrigerator (2-8ºC) prior to testing.

Use Transferrin Turbilatex stool collection tubes for sample collections described the instructions for use.

Assay procedure

Application parameter set up:
Specific analyzers settings for Transferrin Turbilatex must be programmed onto the analyzer, see below. For instructions, consult the Chemwell®-T (Awareness Technology Inc.) analyzer manual and instructions for use provided with the kit.

Loading of reagents:
Load reagents according to the Chemwell®-T (Awareness Technology Inc.) analyzer manual.

Calibration curve establishment:
A 6 point calibration curve can be established in Chemwell®-T (Awareness Technology Inc.) analyzer. For instructions consult analyzer manual.

Calibration stability:
Calibrate the system every week is extremely recommended. Recalibrate the system when reagent lot is change or when the controls are out of the assigned range given in the control label and CoA.

QC controls:
Transferrin Turbilatex controls C1 and C2 must be assayed each day before running patient fecal sample extract to validate the calibration curve. The controls have assigned value ranges indicated on the label and certificate of analysis supplied. The control measurements must be within the indicated value range to obtain valid results for patient fecal extract. If the control values are out of range, follow next procedures: 1) Repeat QC control measurement, 2) Repeat calibration measurement.

Results:
The results are evaluated automatically by the analyzer and presented in ng human transferrin (hTf)/mL.

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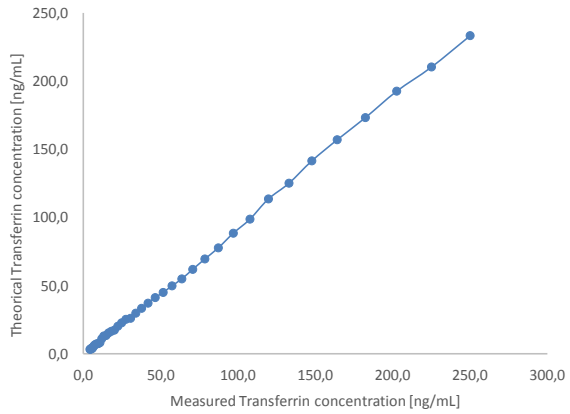
Performance characteristics

The following results have been obtained during the validation of Transferrin Turbilatex on the Chemwell®-T (Awareness Technology Inc.) analyzer.

Linearity:
Transferrin Turbilatex on Chemwell®-T (Awareness Technology Inc.) analyzer using calibrator kit is linear in the calibration range of 0-250 ng hTf/mL.



Measuring range:
Transferrin Turbilatex assay measuring range is 5-250 ng hTf/mL on the Chemwell®-T (Awareness Technology Inc.) analyser. Samples higher concentrated than 1000 ng hTf/mL must be diluted for proper quantification by the user, using additional sample buffer.

Prozone effect
Using the reported parameters, no hook effect was observed up to 2 µg hTf/mL. Samples with Transferrin concentration of 10 µg/mL give a typical positive result >250 ng hTf/mL.

Detection limit
Limit of detection (LOD): 5 ng hTf/mL. The lower limit of detection of Transferrin Turbilatex was determined on 20 samples and 2 sample replicates as the mean value + 2 SD.

Limit of quantification (LOQ): 7 ng hTf/mL. The lower limit of quantification is defined as the lowest actual amount of analysis that can be reliably detected; imprecision is < 20% as CV% on the Chemwell®-T (Awareness Technology Inc.) analyzer.

Precision
Transferrin Turbilatex was tested with three different controls levels.

	Low (15 ng/mL)	Medium (80 ng/mL)	High (200 ng/mL)
N	20	20	20
Mean (ng/mL)	14.8	81.5	197.2
SD (ng/mL)	1.8	6.2	13.7
CV (%)	12	7	6

Method comparison

Reults obtained with Transferrin Turbilatex on the Chemwell®-T (Awareness Technology Inc.) analyzer were compared with an immunochromatographic test (CerTest Transferrin, CerTest)
The results were as follows:

	Sensitivity	Specificity
Transferrin Turbilatex vs CerTest Transferrin	95%	>99%

Shipping damage

Please notify your distributor, it this product was received damaged.

Symbols key

IVD	For *in vitro* diagnostic use only		Keep dry
	Consult instructions for use		Temperature limitation
REF	Catalogue number	LOT	Lot number
	Use by		Manufacturer
Σ n	Contains sufficient for <n> test	DIL	Sample diluent

Manufacturer

CERTEST BIOTEC

Pol. Industrial Río Gállego II,Calle J, Nº 1, 50840,
San Mateo de Gállego, Zaragoza (SPAIN)
www.certest.es

NOTES

Please refer to the instruction for use for the detailed information about the test on the following:
Synthesis; Principle; Precautions; Reagents; Specimen collection; Interpretation of results.

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Chemwell®-T (Awareness) /Application parameters

ASSAY PARAMETERS	
Std. No	6
R1	150 µL
Sample	30 µL
R2	30 µL
Others	NA
Reaction mode	Endpoint
Primary wavelength	505 nm
Secondary wavelength	None
Direction	Increase
Reagent blank lecture	10 seconds after R2
Final lecture	300 seconds after blank lecture
Reaction time	10 min
Linear range	0-250 ng/ml
CALIBRATION	
Calibration Method	Polinomial 3rd
Calibration set	6 calibrators
Blank	Calibrator 1 (0 ng/ml)
Calibrator 1	Calibrator 2 (10 ng/ml)
Calibrator 2	Calibrator 3 (25 ng/ml)
Calibrator 3	Calibrator 4 (50 ng/ml)
Calibrator 4	Calibrator 5 (100 ng/ml)
Calibrator 5	Calibrator 6 (250 ng/ml)
STEPS	
Addition R1	
Addition Sample	
Incubation	5 min
Addition R2	
Blank Lecture	
Incubation	5 min
Final lecture	

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