

TRANSFERRIN – Instructions for use



R1: 1x 50 mL **REF** A-R1100004201
R2: 1x 5 mL

SUMMARY AND EXPLANATION OF THE TEST

Iron binding protein, binds ferric ions preventing iron intoxication and loss via kidneys. Increased levels are found in iron deficiency, pregnancy, oestrogen administration and lipoidal nephrosis. Decreased levels may be encountered in hereditary deficiencies, testosterone administration, infection, acute inflammation, some forms of nephrosis, tumors, haemochromatosis, acute malaria and malnutrition.

PRINCIPLE OF THE TEST

Measurement of antigen-antibody reaction by the end-point method.

Transferrin Reagent Kit

Code A-R1100004201

Reagent 1 (R1) - Buffer - 1 x 48.5 mL/vial

Reagent 2 (R2) - Antiserum - 1 x 4.5 mL/vial

Each vial is ready to use and contains:

Reagent 1:	Conc.	U.M.
Phosphate buffered saline (pH 7.43)	/	/
Sodium azide	0,95	g/L
Reagent 2:	Conc.	U.M.
Phosphate buffered saline (pH 7.43)	/	/
Polyclonal goat anti-human Transferrin (variable)	/	/
Sodium azide	0,95	g/L

Reagent Preparation:

Liquids reagents ready for use.

Storage and Stability:

If stored at 2 - 8°C avoiding direct light, the reactants remain stable until the expiration date printed on the label. Stability in the instrument is at least 4 weeks if contamination is avoided. Do not freeze. Do not freeze the reagents.

EQUIPMENT / ACCESSORIES REQUIRED AND NOT SUPPLIED

General laboratory equipment

Saline (9 g/L)

Calibrators and/or Control

(Pooled human serum, liquid and stabilized. Contains 0.95 g/L sodium azide. Value is stated in the insert)

PRECAUTIONS AND LIMITATIONS

For *in vitro* diagnostic use.

Only experienced laboratory personnel should use this test and handling should be in agreement with Good Laboratory Practice (GLP). Reagents from different lots must not be interchanged.

Safety Precautions

- Each donor unit used in the preparation of the reagents, standards and controls was found to be negative for the presence of HIV1 and HIV2 antibodies, as well as for the hepatitis B surface antigen and anti-hepatitis C antibodies, using a method approved by the FDA
- Do not pipet by mouth.
- Do not smoke, eat or apply cosmetics in areas in which patients' samples or kit reagents are handled.
- Cuts, abrasions, and other skin lesions should be properly protected with an appropriate waterproof dressing.
- Take care to avoid self-inoculation, splashing of mucous membranes or generation of aerosols.
- Laboratory gloves should be worn while handling patients' samples or disposing of solid or liquid wastes.
- In addition to the eventual risk indications regarding the active components, the reagents contain inactive components such as preservatives (e.g. sodium azide or others) and detergents. The total concentrations of these components is lower than the limits reported by the current directive and following modification and amendments. However, it is recommended to handle reagents carefully, to avoid ingestion and contact with eyes, skin and mucus membranes and to use laboratory reagents according to good laboratory practice.
- All human samples must be handled and disposed of as potentially infectious materials.
- For information about safe handling, read carefully the Material Safety Data Sheet (MSDS).

Disposal of Reagents

Disposal of reagents must be performed in accordance with the EC regulations regarding waste, or the local national or regional legislation.

SPECIMEN COLLECTION AND STORAGE

Use fresh serum.

If the test can not be carried out on the same day, the serum may be stored at 2 - 8°C for 48 hours. If stored for a longer period, the sample should be frozen.

Quality control

It's necessary, each time the kit is used, to perform the quality controls and to check that values obtained are within the acceptance range provided in the insert. Each laboratory should establish its

own mean and standard deviation and adopt a quality control program to monitor laboratory testing.

Automation

All applications not explicitly approved by ISE S.r.l. cannot be guaranteed in terms of performance, and must therefore be established by the operator.

Procedures

Sample/Control/standard: dilute 1:2 in saline 9g/L

Reference curve: generate a reference curve by diluting the standard high level Ref R1300002501 1:1, 1:2, 1:4, 1:8, 1:16 in saline 9 g/L. Use saline 9 g/L as zero point.

Method for automated instrumentation

Analyzer:	Miura Family		
Analyte Name :	Transferrin	Ref.:	A-R1100004201
Method Code:	TRF		
Type:	Different. Sample Blk.		
Unit:	mg/dL		
Filter F1:	340 nm		
Blank in calculation:	Not Used		
Step	Reaction volume	U.M.	
Sample volume:	3	µL	
Volume Reagent 1:	200	µL	
Volume Reagent 2:	20	µL	
Incubation Time	60	Sec.	
Reading Time:	300	Sec.	
Calibration	See Reference Curve		

EXPECTED VALUES

170 - 340 mg/dL (IFCC)

Reference values are considered indicative since each laboratory should establish reference ranges for its own patient population. The analytical results should be evaluated with other information coming from patient's clinical history.

PERFORMANCE CHARACTERISTICS

The performance characteristics of the Transferrin reagents were measured on a clinical chemistry analyzer.

Measuring Range: 0 - 500 mg/dL
Detection Limit: 30 mg/dL
Hook effect: > 1400 mg/dL
Sensitivity: 0.00093 ABS units/concentration unit

Precision:

	Low	Medium	High
Intra-Run [%CV]	4.78	1.30	0.78
Inter-Run	4.64	2.46	/

Accuracy:

	Control	Assigned	Measured
[mg/dL]			
Bio-Rad 1	142 (124 - 168)		153
Bio-Rad 2	328 (262 - 394)		354

Specificity: Monospecific
Interferences: No interference for: Hemoglobin (1000 mg/dL), Na-citrate (1000 mg/dL), Heparin (50 mg/dL), Bilirubin (20 mg/dL), Triglyceride (2500 mg/dL)
None
Limitations: Comparison with Turbidimetry: $y = 0.8866x + 40.481$ / $r = 0.9756$
Stability at 4°C: at least 3 years after production

BIBLIOGRAPHY

- Dati, F. et al., Lab. Med. 13, 87 (1989)

- Numero lotto / Lot numer
- Consultare la metodica operativa / consult instructions for use
- Per uso diagnostico in-vitro / For in-vitro diagnostic use
- Prodotto da / manufactured by
- Data di scadenza / expiry date
- Temp. Di Conservazione / storage temperature

