

External quality assurance for reference measurement

Mindray participates RELA (External quality control for reference laboratory) and CAP (College of American Pathologists external quality control)



Packaging Specification				
Description	Part.No.	Package		Method
		R1	R2	
Fe*(C)	105-002198-00	2x40mL	1x16mL	Colorimetric Assay
	105-002199-00	4x40mL	2x16mL	
	105-002200-00	4x40mL	2x16mL	
Fe**(C and Q)	105-001583-00	2x40mL	1x16mL	Colorimetric Assay
	105-001584-00	4x40mL	2x16mL	
	105-001585-00	4x40mL	2x16mL	
FER	105-002244-00	1x12mL	1x7mL	Particle-enhanced Immunoturbidimetric Assay
	105-002245-00	1x20mL	1x12mL	
TRF	105-002246-00	1x32mL	1x5mL	Immunoturbidimetric Assay
	105-002247-00	1x45mL	1x7mL	
UIBC	105-002256-00	4x20mL	2x12mL	Colorimetric Method
	105-002257-00	4x54mL	4x16mL	

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Anemia occurs when you have less than the normal number of red blood cells in your blood or when the red blood cells in your blood don't have enough hemoglobin. Hemoglobin is a protein that gives the red color to your blood. Its main job is to carry oxygen from your lungs to all parts of your body. If you have anemia, your blood does not carry enough oxygen to all the parts of your body. Without oxygen, your organs and tissues cannot work as well as they should.

It is estimated that approximately 1.62 billion people in the world suffer from anemia. Anemia can cause fatigue, headaches, shortness of breath, dizziness, rapid heartbeat, and a number of other symptoms. There are hundreds of types of anemia, which is divided into three groups: excessive blood loss anemia, excessive red blood cell destruction (hemolysis) anemia and decreased or deficient red blood cell production anemia.

Mindray's anemia panel includes Iron (Fe), Ferritin (FER), Transferrin (TRF) and Unsaturated Iron Binding Capacity (UIBC). These parameters work together to indicate if you have a status of anemia.



Performance characters

Method: Colorimetric Assay

Linearity range: 0.9~200 µmol/L

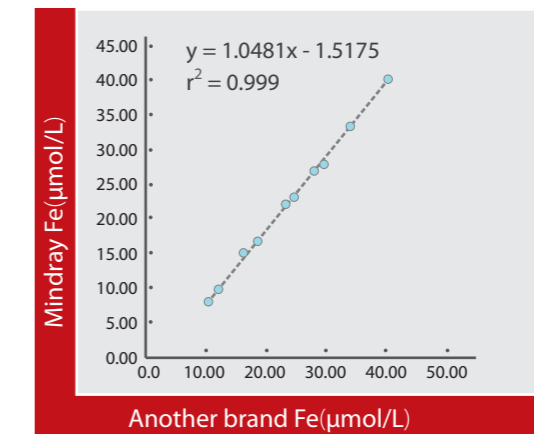
Sensitivity: minimal detectable level as 0.9 µmol/L

Anti-interfering ability: Bilirubin(up to 40 mg/dL),

Lipemia(up to 500 mg/dL), Hemoglobin(up to 50 mg/dL)

Traceability to manufacturer's selected measurement procedure

Method comparison



TRF

Transferrin is the iron transport protein in serum. It is synthesized in liver and transfers iron through serum to bone marrow to produce blood red cell. The degree of transferrin saturation becomes one of the most sensitive indicators of functional iron depletion if the iron is deficient.

TRF level is increased in the case of hypochromic anemia. However, if the anemia is due to a failure to incorporate iron into erythrocytes, the TRF concentration is normal or low but the protein is high saturated with iron. Besides, TRF quantity could also diagnose nephritic syndrome, chronic renal failure, severe burns, severe liver disease, inflammation and protein malnutrition.

Performance characters

Method: Immunoturbidimetric Assay

Linearity range: 0.5~4.5 g/L

Sensitivity: minimal detectable level as 0.5 g/L

Anti-interfering ability: Bilirubin(up to 20 mg/dL),

Lipemia(up to 500 mg/dL), Hemoglobin(up to 500 mg/dL)

Traceability to ERM-DA470k reference material

Method comparison



UIBC

Transferrin is the plasma iron transport protein binding irons at physiological pH.

The additional amount of iron that can be bound is the unsaturated iron binding

capacity (UIBC). UIBC is usually determined directly by saturating the transferrin at

an alkaline pH with a known but excess amount of iron. Whereas UIBC increases due

to hypochromic anemia and erythrocytes over production, low level UIBC cT₁* ma4(in8 .(er pr)1276(onc)6(en)l .(ery78mcble lev)10(T

Method comparison

