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TOTAL SCAVENGER CAPACITY CE

(CHEMILUMINOMETRIC) STABLE REAGENT

Cat. No.: 48561
120 ml
(2×30 ml+1×4 ml+1×60 ml)

Reagent kit for the determination of total scavenger capacity of plasma.

The formation of reactive oxygen intermediers in the human body is a natural progress. The damaging effect of the free radicals can be avoid in the human body by the antioxidant mechanisms to some extent however if the balance is shifted into a greater number of free radicals oxidative stress may occur.
Free radicals have significant role in ageing, inflammations, carcinogenesis and liver diseases.
The determination of total scavenger capacity is suitable for screening tests because the total scavenger capacity of the plasma can decrease in case of lack of vitamins, inflammations, tumors and damage of immuno-processes and also for monitorising the efficiency of treatments.

Method

The microperoxidase system $H_2O_2/OH^{\bullet}$ emits light at alkaline pH, the effect of complex iron creates $OH^{\bullet}$ radical from H_2O_2 - in *Fenton*-type reaction - and the radical generates luminol.
Luminol is transformed into stable aminophtalate anion and $h\nu$ quantum (420 nm) is released.
If tissue sample or suspendation is added to the system then this blocks the chemical (chemiluminescence) reaction. There is a connection between the rate of blocking and the redox status of the examined biological material.

Reference value

$$\frac{RLU_{sample}}{RLU_{blank}} < 0{,}1$$

It is recommended that each laboratory should assign its own normal range.

Reagents

R1/1 Reagent (microperoxidase freeze dried reagent)
-Microperoxidase
R1/2 Reagent (luminol solution)
- Tris
- Luminol
R2/1 Reagent (hydrogen peroxide solution)
- H_2O_2
R2/2 Reagent (buffer for the hydrogen peroxide solution)
-Tris HCl

Safety instructions:

Reagent 1.1:
X, Irritant
R36/37/38 Irritating to eyes, respiratory system and skin.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

For *in vitro* diagnostic use only.

Sample

Citrate plasma.
The measurement has to be done in the shortest time after sampling. The sample has to be stored at 2-8°C.

Preparation and stability of working reagent

1. Solution: Dissolve R1/1 reagent in R1/2 reagent.
When the solution is stored at 2-8°C it is stable for min. 2 weeks.

2. Solution: Mix the R2/1 reagent and R2/2 reagent in the ratio of 1:15.
When the solution is stored at 2-8°C it is stable for min. 2 weeks.
The ideal RLU of the sample blank is between 5-8 million.

Assay conditions

Method:	kinetic
Measurement time:	30 sec
Injection:	A+B

You need to use the total RLU during the measurement period, not the maximum value.
During the measurement the reagents have to be incubated at 37 °C.

Pipette into

	blank	**sample**
1. solution	300 µl	300 µl
2. solution	300 µl	300 µl
sample	-	20 µl

Note

Heavy metals especially iron interfere with the reaction. Dishes have to be clean.

IVD For in vitro diagnostic

Use by (last day of the month)

Temperature limitation

LOT Batch Code

REF Code

Bibliography

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