* Tüm testler “RELASSAY” markadır. (Menşai: Türkiye)
* Testlerin çalışılacağı cihaz: Mindray marka BS300 model tam otomatik biyokimya cihazı
* Test metotları: Kolorimetrik

**YÖNTEMLER**

**TAS- TOS- OSI**

Venous blood was drawn into blood tubes and serum was separated from the cells by

centrifugation at 1500 g for 10 min, and theserum samples were stored at –80 °C until the

analyses.

Analytical methods

**TOTAL ANTIOXDANT STATUS (TAS)**

TAS levels were measured using commercially available kits (Relassay, Turkey). The novel

automated method is based on the bleaching of characteristic color of a more stable ABTS

(2,2 ′ - Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid)) radical cation by antioxidants. The

assay has excellent precision values, which are lower than 3%. The results were expressed as

mmol Trolox equivalent/L (Erel O. A novel automated direct measurement method for total

antioxidant capacity using a new generation, more stable ABTS radicalcation. Clin Biochem

2004;37:277-85.)

**TOTAL OXIDANT STATUS (TOS)**

TOS levels were measured using commercially available kits (Relassay, Turkey. In the new

method, oxidants present in the sample oxidized the ferrous ion-o-dianisidine complex to

ferric ion. The oxidation reaction was enhanced by glycerol molecules abundantly present in

the reaction medium. The ferric ion produced a colored complex with xylenol orange in an

acidic medium. The color intensity, which could be measured spectrophotometrically, was

related to the total amount of oxidant molecules present in the sample. The assay was

calibrated with hydrogen peroxide and the results were expressed in terms of

micromolar hydrogen peroxide equivalent per liter (μmol H2O2 equivalent/L). ( Erel O. A

new automated colorimetric method for measuringtotal oxidant status. Clin Biochem

2005;38:1103-11. ).

**OXIDATIVE STRESS INDEX (OSI)**

The ratio of TOS to TAS was accepted as the oxidative stress index (OSI). For calculation, the

resulting unit of TAS was converted to μmol/L, and the OSI value was calculated according to

the following Formula : OSI (arbitrary unit) =

TOS (μmol H2O2 equivalent/L) / TAC (μmol Trolox equivalent/L). (1-3).

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2. Kosecik M, Erel O, Sevinc E, Selek S. Increased oxidative stress in children exposed to

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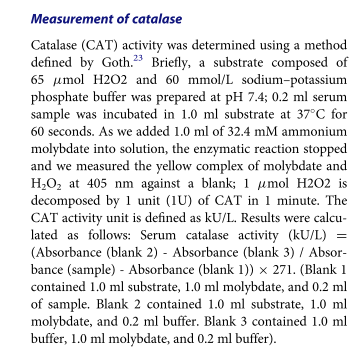
3. (Harma M, Harma M, Erel O (2003) Increased oxidative stress in patients with

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**SOD**

The role of speroxide dismutase is to accelerate the dismutation of the toxic radical, produced during oxidative energy processes to hydrogen peroxide and molecular oxygen. This method employs xanthine and xanthine oxidase to generate superoxide radicals which react with 2-(4-iodophenyl)-3-(4-nitrophenol)-5-phenyltetrazolium chloride to form a red formazan dye.. the superoxide dismutase activity is then measured by the degree of inhibiton of this reaction

**Catalase**

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Nitrik oksit

NO Ölçümü

NO ölçümü Griess yöntemi esas alınarak gerçekleştirilmiştir. NO çok kısa yarı ömürlü olduğu için hızla metabolitleri olan nitrit ve nitrata dönüşür. Nitrit doğrudan, nitrat ise nitrite indirgenerek Griess reaktifiyle ölçülür. Griess yönteminde; sülfanilamidin amino grubu asit ortamda, nitrit ile reaksiyona girerek diazotizasyona uğrar ve Naftiletilendiamin (NED) ile mor renkli bir azo ürünü oluşturur. Oluşan renk spektrometre cihazında 540 nm dalga boyunda okunduktan sonra nitrit standartları kullanılarak hazırlanmış kalibrasyon eğrisine göre plazma NO düzeyleri indirekt olarak hesaplanır.