



**CATACHEM**

## TOTAL IRON BINDING CAPACITY-TIBC

### PRODUCT / SERVICE INFORMATION

#### **Catachem, Inc. Introduces the Serum Total Iron Binding Capacity (TIBC) In-Vitro Diagnostic (IVD) Chemistry Reagent Kit.**

Catachem introduces the VetSpec™ Direct Serum Total Iron Binding Capacity (TIBC) In-Vitro Diagnostic Chemistry reagent test kit. Catachem is pleased to announce the introduction of our new reagent system.

Reports of direct determination of iron and iron-binding capacity were published by Schrade, et al in 1954. Iron-binding capacity was determined by calculating the results of total iron and unsaturated iron-binding capacity. These procedures were satisfactory, but produced inaccurate results due to the interferences and manipulation of results. Catachem's direct procedure for TIBC is direct and results are reported in final units without the need for additional calculations.

#### **Method Principle**

In acid buffered color reagent containing Chromazurol B and excess ferric iron, transferrin bound iron from the serum sample dissociates into free ferric iron. These free iron ions and the excess iron in the reagent form a colored complex with the excess chromazurol-B and an increase in absorbance is observed. Addition of a strong ionic strength buffer, shifts the pH to the alkaline side increasing the affinity of transferrin for iron to the extent of extracting iron from the iron-dye complex until it becomes totally saturated with iron and as a result of this saturation the absorbance decreases. The decrease in absorbance is directly proportional to the TIBC in the original serum sample.

#### **Method Performance Characteristics**

**Sensitivity:** The sensitivity of this method is 0.00010-0.00012 absorbance units per ug/DL.

**Linear Range:** In this method there is no significant nonlinearity over the range of 0-600 ug/DL.

**Precision:** Within-run and day-to-day precision is summarized below.

#### **Precision Study**