CATACHEM

Vet Spec
BROMIDE PRECIPITATING REAGENT
C424 - 30

Intended Use
For the treatment of serum or plasma samples to remove interferents prior to the **IN VITRO** quantitative determination of Bromide using Catachem Bromide reagents with manual or automated assays.

Clinical Significance
Bromide assays are used primarily for monitoring the therapeutic Bromide treatment in canines.

Method Principle
Lipemia at concentrations greater than 1000mg/dL and hemoglobin at concentrations greater than 100mg/dL can interfere with the Catachem Bromide assay, producing elevated values. In cases where samples are suspected to have elevated lipemia and/or hemoglobin, it is recommended to pretreat the samples with Catachem Bromide Precipitating Reagent as follows:

1. Lipemia, hemoglobin and serum proteins are precipitated from serum samples with Catachem Bromide Precipitating Reagent containing trichloroacetic acid. The Bromide ions remain soluble and are isolated from the precipitated proteins by centrifugation.

2. The isolated supernatant containing the Bromide ions is then assayed using the Catachem manual or automated Bromide procedure. The reaction scheme illustrates the steps that occur in the isolation and assay of Bromide.

$$\text{Serum Sample} \xrightarrow{\text{TCA}} \text{Precipitated mixture}$$

$$\text{Precipitated mixture} \xrightarrow{\text{Centrifugation}} \text{Supernatant } (Br^-)$$

$$AuCl_3 + 3Br^- \longrightarrow AuBr_3 + 3Cl^-$$

REAGENT
Bromide Precipitating Reagent
Each liter contains approximately:

Trichloroacetic Acid	0.60 moles

Precautions
Handle these reagents using good laboratory practice. **DO NOT PIPETTE REAGENT BY MOUTH.** Avoid contact with skin and eyes. If contact occurs, wash affected area with plenty of cold water. Clean spills immediately. Dispose of in accordance with local regulations and laws. Refer to MSDS for additional information.

Bromide Precipitating Reagent
The Bromide Precipitating Reagent is packaged ready for use. No preparation is required.

Bromide Precipitating Reagent Storage and Stability
Store the Bromide Precipitating Reagent at 2 - 26°C. When stored as directed, this reagent is stable until the expiration date indicated on the label.

Specimen Collection And Stability
Clear unhemolyzed sera are the specimens of choice. Serum should be separated immediately from the clot and analyzed promptly or stored at 2 - 8°C. Bromide in serum is stable 7 days at room temperature, 10 days refrigerated at 2 - 8°C and for several months frozen at -20°C. [2] Heparinized plasma is acceptable. Do not use Blood Bank plasma or plasma anticoagulated with Sodium citrate. [3]

Materials Provided
Catachem Bromide Precipitating Reagent

Materials Required but Not Provided
- Centrifuge
- Centrifuge tubes
- Transfer pipettes
- Spectrophotometer with cuvettes or automated analyzer
- Catachem Bromide Reagents
- Catachem Calibrator with assigned Bromide values
- Catachem Bi-Level Quality Control material with assigned Bromide values

Packaging
The Catachem Bromide Precipitating Reagent is packaged in a single 25mL bottle.

Procedure
These instructions outline the procedure for pretreating hemolyzed samples before performing the Bromide assay using an automated or manual procedure.

Read the entire sample pretreatment procedure and the manufacturer's instructions on the operation of their respective analyzer.

Directions For Use
Catachem Bromide sample pretreatment requires one reagent, Bromide Precipitating Reagent.

Sample Pretreatment Procedure

1. Appropriately mark the centrifuge tubes for the samples requiring pretreatment.

2. Add 0.5 ml of serum sample.

3. Add 0.5 ml of Bromide Pretreatment Reagent. Vortex-mix immediately **(DO NOT INVERT)**.

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4. Let stand at room temperature for 5 minutes.

5. Centrifuge at 1500 x g for 15 minutes.

6. Immediately after centrifugation, transfer supernatant (use transfer pipette) into a clean, labeled test tube

CAUTION: Do not disturb the sediment pellet. Inclusion of pellet particles will result in a falsely elevated bromide value.

Supernatant is stable for two weeks at 2 - 8°C.

7. Assay the supernatant for Bromide using Catachem reagents with a manual or automated Bromide procedure. Contact Catachem to obtain automated instrument specific parameters.

8. **The Bromide test results for samples pretreated with Catachem Bromide Precipitating Reagent should be multiplied by a factor of 2 to compensate for the dilution of the samples by the precipitating reagent.**

NOTE:

If you elect to pretreat calibrators and controls as well as samples, please contact Catachem Technical Support for additional information before performing the assay either manually or with an automated analyzer application provided by Catachem.

Interfering Substances
Samples with the following concentration of substances have no significant effect on the accuracy of this Bromide procedure:

- Bilirubin ≤ 5mg/dL
- Hemoglobin ≤ 100mg/dL
- Lipemia ≤ 1000mg/dL

Other substances and certain drugs are also known to influence the Bromide values. A summary of the influence of drugs on clinical laboratory procedures may be found by consulting D.S. Young et al [(4)].

Bibliography

1. Fundamentals of Clinical Chemistry. Edited by Norbert Tietz 2nd. Ed. Philadelphia: WB Saunders; 1976.
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3. Brans YW, et.al. Antipyrine Interferes with Chemical Determination of Bromide in Simultaneous Estimation of Total Body Water and Extracellular Water. Clin. Chem. 35, No. 7 (1989)
4. Young DS, Pestamer LC, Gibberman V. Effects of drugs on clinical laboratory tests. Clin. Chem. 21, No. 5 (1975).

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