

Aluminum

For water

Aluminon Method

Introduction

Aluminum, the earth's most abundant metal, is present in natural waters through contact with rocks, soil and clay. Alum coagulation in water clarification systems may also contribute to the aluminum content of treated water, although only 20–50 µg/L of aluminum remain in the finished product from a well-controlled operation.

The Aluminon Method is one of the oldest and most thoroughly documented methods available for determining aluminum in water. The AluVer 3™ Aluminum Reagent used in this method is packaged in powder pillow form, providing exceptional stability.

Chemical reactions

AluVer is an aluminon reagent in combination with a pH buffer. AluVer 3 reacts with aluminum present in a sample to form a reddish-colored solution in direct proportion to the aluminum concentration.

Ascorbic acid is added prior to the addition of AluVer 3 to eliminate interference due to iron. To establish a reagent blank, the sample is split after the addition of the AluVer 3. Bleaching 3 Reagent is then added to one-half of the split sample to bleach out the color of the aluminum aluminon complex.

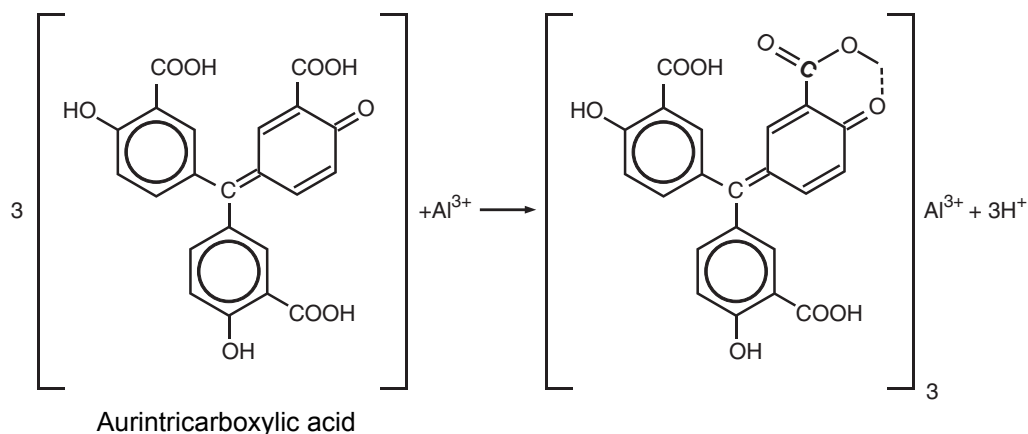


Figure 1 Chemical reaction