Phenols

For water, wastewater and seawater **4-Aminoantipyrine Method**

Introduction

Phenols are produced as waste in oil refineries, coke plants, and in some chemical manufacturing plants. Natural waters normally contain less than 1 µg/L, but concentrations up to 20 µg/L occur in some areas. Levels of 10 to 100 µg/L phenol are detectable by taste and odor. A 1-µg/L phenol concentration can impart an objectionable taste to water following slight chlorination.

Chemical reaction

Phenols and all substituted phenols (except those with para substitution), are determined by buffering the sample to a pH of 10.0 and adding 4-aminoantipyrine to produce a yellow or amber-colored complex in the presence of ferricyanide ion. The color is intensified through extraction of the complex into chloroform. Measurement of this color quantitatively determines the phenol concentration of the sample.

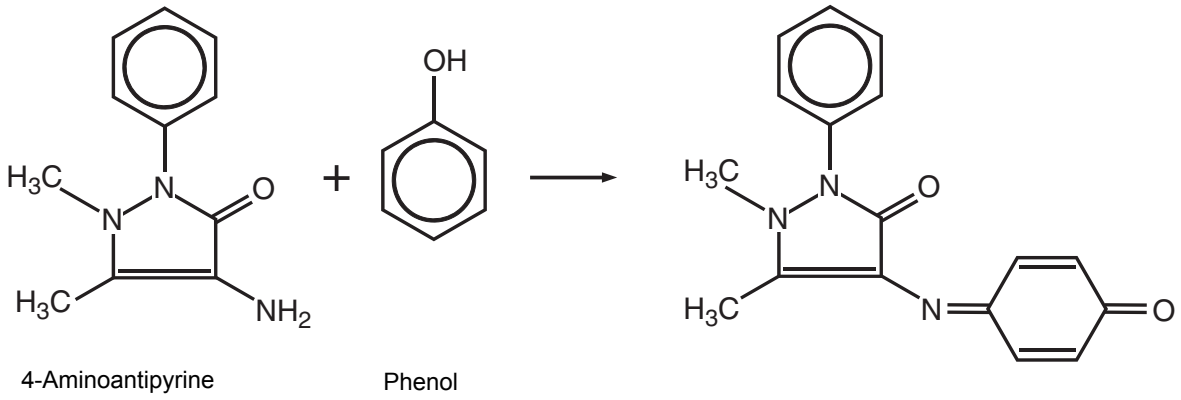

Figure 1 Chemical reaction for 4-Aminoantipyrine method