Australian Standard®

Method of test for determination of histamine levels in fish and fish products/seafoods by fluorometric method

PREFACE

This Standard was prepared by the Standards Australia Committee FT-024, Food Products.

The objective of this Standard method is to establish a quantitative method for the determination of histamine levels in fish and fish products by fluorometric method.

FOREWORD

Histamine, although having a physiological role in fish, is also associated with decomposition. The presence of histamine in fish is an indicator of decomposition and has been linked to scombroid poisoning. The occurrence of high levels of histamine in decomposed fish correlates well with outbreaks of scombroid poisoning. The natural levels of histamine in fresh fish is less than 50 mg/kg and the higher levels in decomposing fish are due to the decarboxylation of histidine, i.e. certain bacteria produce the enzyme histidine decarboxylase that reacts with free histidine to produce histamine.

Histidine is present in greater amounts in scombroid fish such as tuna, mackerel and bluefish increasing their vulnerability to excessive histamine (scombrotoxin) formation during handling and storage.

METHOD

1 SCOPE

This Standard sets out a quantitative method for the determination of histamine levels in fish and fish products/seafoods by fluorometric methods.

NOTE: This method has been tested using amines relevant to seafood such as Cadaverine, Putrescine and Spermine and has shown insignificant fluorescence response compared to histamine response. Therefore, it has been concluded that the detection was specific to histamine.