



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 5009.234-2016

Method for analysis of hygienic standard of soybean sauce

食品安全国家标准

(English Translation)

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Foreword

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1 Scope

This Standard specifies the method for determination of ammonium salt in soy sauce.

This Standard applies to the determination of ammonium salt in soy sauce.

2 Principle

Heat and distill the sample in the alkaline solution to free the ammonia, which is absorbed by the boric acid solution; then use hydrochloric acid standard solution to titrate and calculate the content.

3.1 Reagents

Unless otherwise specified, all the reagents in this method are analytical reagents, the water is grade-1 water that is specified by GB/T 6682.

3.1.1

Magnesium oxide (MgO).

3.1.2

Boric acid (H₃BO₃).

3.1.3

Methyl red (C₁₅ H₁₅ N₃ O₂).

3.1.4

Bromocresol green (C 15H 14 Br4O5 S).

3.1.5

Ethanol (C 2H 5OH).

3.2 Preparation of reagents

3.2.1

Boric acid solution (20 g/L)

Weigh 20.0 g of boric acid; add water to dissolve;

dilute to 1 000 mL.

3.2.2

Hydrochloric acid standard titration solution $[c(\text{HCl})] = 0.100 \text{ mol/L}$.

3.2.3

Mixing indicator solution

1 part of methyl red-ethanol solution (2 g/L) and 5 parts of bromocresol green-ethanol solution (2 g/L); prepare when it is needed.