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

GB 1886.79-2015

**National Food Safety Standard -- Food Additives -- Dilauryl
thiodipropionate**

食品安全国家标准 食品添加剂 硫代二丙酸二月桂酯

(English Translation)

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1 Scope

This standard applies to thiodipropionate and lauryl alcohol as raw materials prepared by esterification of food additive dilauryl thiodipropionate.

2 Molecular formula, relative molecular mass and structural formula

Formula 2.1

C₃₀H₅₈O₄S

2.2 Formula

CH₂

CH₂ CH₂ COO (CH₂)₁₁CH₃ CH₂ COO (CH₂)₁₁CH₃

2.3 Relative molecular mass

514.84 (according to 2007 international relative atomic mass)

3.1 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 Sensory requirements

Project requires test methods Color White State lamellae Take the right amount of sample is placed in a clean, dry white porcelain dish, in Observe the color and condition of natural light

3.2 Physical and Chemical Indicators

Physical and chemical indicators should be consistent with the provisions of Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Dilauryl thiodipropionate ester ($C_{30}H_{58}O_4S$) content, w /% 99.0 ~ 100.5 Appendix A A.3 Acidity (thiodipropionic acid), w /% ≤ 0.2 Appendix A A.4 Freezing point/ $^{\circ}C$ ≥ 40 SN/T 0801.17 Lead (Pb)/(mg/kg) ≤ 10 GB 5009.12 Appendix A Testing method A.1 General Provisions this standard reagents and water in the absence of other specified requirements, refer to the three water analytical reagent and GB/T 6682 regulations. Reagent the standard solution, standard solution for measuring impurities, formulations and products, did not indicate when the other requirements according to GB/T 601, GB/T 602, GB/T 603 provisions of the preparation. Solution was used in the tests did not indicate what is formulated with solvent, it refers to an aqueous solution.

A.2 Identification Test Solubility. soluble in most organic solvents, insoluble in water.

A.3 Determination of dilauryl thiodipropionate ester ($C_{30}H_{58}O_4S$) Content 700mg accurately weighed sample placed in 250mL conical flask, 100mL of acetic acid and 50mL of ethanol. At about 40 $^{\circ}C$ Article Lower heating element mixture until dissolved sample. Then add 3mL hydrochloric acid and 4 drops of test solution set ethoxy Ke Yi (50mg of ethoxy Ke Yi set dissolved in 25mL water and 25mL ethanol mixture, add 3 drops of hydrochloric acid, stirring, if necessary, can be filtered to give a clear liquid), Li Namely with 0.05mol/L bromine solution titration. Until after the end point is reached when the (pink), then add 4 drops of the above indicator solution and continue titration to change from red as a pale yellow. At the same time carry out a blank test and make the necessary corrections. 0.05mol/L solution of bromine 25.74mg $C_{30}H_{58}O_4S$ equivalent per ml.

Minus is $C_{30}H_{58}O_4S$ in the "determination of acidity" value (A.4) measured in thiodipropionic acid content and multiplied by 2.89, the difference between content.

A.4 Acidity (thiodipropionic acid) Determination Accurately weigh 2g sample placed in 250mL Erlenmeyer flask was added a mixture of 1 part 50mL of methanol and 3 parts benzene dubbed dissolved After the mixed solution was added 5 drops of phenolphthalein solution, then 0.1mol/L potassium hydroxide ethanol solution titrated. Per milliliter 0.1mol/L potassium acetate Alcohol solution 8.91mg3,3'- thiodipropionic acid equivalent.