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

SN/T 3182-2012

**Food contact materials. Polymers. Test methods for overall
migration into olive oil. Modified method for use in case where
incomplete extraction of olive oil occurs**

食品接触材料 高分子材料 橄榄油模拟物中总迁移量的试验方法 橄榄油不完全抽
提时的改进方法

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard is equivalent to using EN1186-10:2002 "Part 10 plastic materials and articles in contact with food. olive oil of total migration Test Method (improved method when the extraction of olive oil can not be fully used) shift "(in English).

This standard editorial changes were made, the main differences are as follows.

--- Because regardless of the technical content of this standard, the preamble of the original text, appendix ZA, references and page after deleting;

--- Chapter 2, according to GB/T 1.1-2009 requirements to prepare normative references;

--- Instead of numbers with decimal point as the decimal comma " , " . " , " ;

--- "mL" changed to "mL" representation;

--- Chapter 5 5.1 increase centrifuge specifications "Speed $\geq 5000\text{r/min}$ ";

--- Original Chapter 8 8.1 "Calculation Method" and 8.2 "precision" were changed to Chapters 8 and 9.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. People's Republic of China Zhuhai Entry-Exit Inspection and Quarantine Bureau.

1 Scope

This standard specifies the limited time and in more than 5 °C, at 175 °C or less (including 175 °C) temperature range of conditions, all soaked in olive Oil mimetic of plastic materials and products, test methods for the determination of overall migration.

This standard applies to full-immersion method, a method of soaking pool, a pouch, filling method, as well as low or high temperatures test sample some plastics, it can be Soxhlet extraction cases can not be completely extracted sample adsorbed olive oil can occur.

This standard through the use of chloroform, toluene, xylene or the like tetrahydrofuran solvent to dissolve the sample, so that the release of olive oil adsorption Come for testing.

This standard applies to soluble or partially soluble in chloroform, toluene, xylene or tetrahydrofuran and insoluble in plastics methanol.

Note 1: This standard uses olive oil as the fatty food simulant. In addition, this standard test method may also employ other simulants D described Suitable modified fat mimetic --- synthetic glycerides mixture, sunflower oil and corn oil. These other fatty food simulants methylation Different chromatograms and olive oil methyl ester product should select the appropriate simulants other fatty ester compound peak was quantified to determine the amount of extracted sample mimics.

Note 2: If this standard or SN/T 2334-2009, SN/T 2817-2011, SN/T in 2735-2010, SN/T 2818-2011 Test method does not Olive oil can be measured overall migration total plastic sample, refer to SN/T 2824-2011 Chapter 6, select the appropriate alternative.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 12804 Laboratory glassware cylinder GB/T 12808 Laboratory glassware single marking pipette SN/T 2334-2009 Food contact materials - Polymer Test Method for olive oil in the total migration of total immersion SN/T 2824-2011 Food contact materials - Polymer overall migration test conditions and methods Selection Guide Principle 3 the standard overall migration of polymer materials, refers to a sample after soaking by reducing the quality of olive oil.

Known quality of the test sample, in the limited time and 5 °C ~ 175 °C (including 175 °C) temperature range critical condition olive oil Lu test, then remove to remove adsorbed on the surface of the sample olive oil and re-weighed. The remaining olive oil in a sample using the dissolution, precipitation, etc.

Step process to extract, after methyl esterification reaction product by gas chromatography were measured. The method of producing a methyl ester using boron trifluoride/A Fatty acid hydrolysis reaction of an alcohol and potassium hydroxide produced olive oil fatty acid methyl esters. Select the test conditions depending on the sample side Formula, the specific situation with reference SN/T 2824-2011 in chapters 4, 5 and 6.

When the plastic is not completely dissolved, as long as the swelling phenomenon, but also to ensure that olive oil sorbed completely released. It should be based on plastic the nature of the choice of materials suitable solvent, in order to ensure that the sample may dissolve or swell. E.g., polystyrene, polycarbonate, or the like may be chloroform Molten plastic, can be used as a chloroform solvent; for polyolefin plastic, toluene or xylene can be used,

especially a low density toluene