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

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Testing method for determining algal resistance of plastics

塑料抗藻性能试验方法

(English Translation)

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Foreword

This standard ASTM G29:1996 (2002) "plastic film anti-algae properties Standard Test Method for" consistent (in English) non-equivalent.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee plastic aging methods Technical Committee (SAC/TC15/SC5) centralized.

1 Scope

This standard specifies the plastic anti-algae performance test methods for evaluating the performance of plastic anti-algae.

This standard does not address issues related to security, the development of standards prior to use by the use of personnel safety and health practices and determine the applicable limits and System range.

2 Principle and summary

This test method is to simulate natural environmental conditions, algae growth, algae growth by physiological characteristics of the design of artificial simulation test for Plastics -

Determination of inhibition of algae and killing effect, to evaluate the performance of plastic anti-algae and algae growth is determined by the degree of visual inspection method.

This standard is a plastic test specimen suspended in a glass beaker at room temperature and exposed to fluorescent light, direct contact with the medium Filamentous blue-green algae of the Oscillatoria (Oscillatoria), every 2d ~ 3d inoculated fresh algae species to sample test bottles. With plastic untreated Material as a control sample or test 21d after the end of the intensive growth of algae in the control sample.

3 Significance and Use

Agriculture, a lot of plastic is used to make film, film seedlings, big films and irrigation pipes, fishing nets, buoys and other farming; industrial areas More widely, such as water and outdoor architectural pipe, submersible pumps, ship building materials. Since the humid climate and light conditions, algae Class of growth and reproduction in large numbers on the surface of plastic or plastic products, algae and its metabolites (such as acids, enzymes and other chemicals) affect not only the plastic the appearance of the material itself, but also affect the performance of plastic or plastic products.

In the swimming pool, artificial ponds, irrigation canals and other facilities usually lined with a plastic film. When weather conditions are suitable, easy raw algae Long, they produce thick and unsightly film on the plastic. This method was used to evaluate the anti-algae grade plastic.

4.1 Light incubator

Temperature can be maintained at $25\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, fluorescent light intensity 2000lx ~ 10000lx.

4.3 Electronic Balance

Precision 0.01g.

4.4 Analytical Balance

Precision 0.0001g.

4.5 High-pressure steam sterilizer

Pressure can be maintained at 0.10MPa ~ 0.11MPa.

4.6 Homogenizer

Speed \u200b\u200bis not less than 10000r/min.

4.7 Beaker

Capacity 1000mL.

4.8 Petri dishes

Diameter 9cm.

Precision 0.1.