1. RAPID TEST TO MEASURE TOTAL POLAR MATERIALS IN FRYING FATS
快速有效地检测煎炸油中的总极性物质

WHY CONTROL FRYING OILS?

During deep fat frying, the fats and oils are exposed to atmospheric oxygen and to moisture at high temperatures (over 160 ºC) for long periods of time.
As a consequence, a series of chemical reactions take place. These reactions produce various harmful compounds and alter, at the same time, the fat/oil organoleptic characteristics (odor, color,taste) and the health effects of the oil/fat. Among these substances, polar compounds may be found; their control allows the assessment of oil oxidation grades.
The importance of controlling polar compounds is also regulated by several national regulations and Global health recommendations which prohibit the sale of foodstuffs which have been prepared or been in contact with oils with a polar content equal to or exceeding
25%.

为什么要管控煎炸油?

油脂在高温的煎炸过程中,
脂肪和油长时间地在超过摄氏160度的高温条件下,
与空气中的水和氧气接触,
从而发生一系列化学反应，这些化学反应生成了大量有害的化合物，
并使油脂的感官特性(气味, 颜色, 味道)
也发生了改变，同时会对人体健康造成不良影响。在诸多的化合物中
，极性化合物可以有效反映油品劣化的程度。
诸多国家和世界卫生组织机构出台了一系列法律措施,
来严格管控极性化合物，规定所销售的油炸食品禁止使用极性组份含量等于或超过25%的煎炸油。

WHY OLEOTEST?

Oleotest is a colorimetric assay that allows to determine the total polar compounds in frying fats in less than 2 minutes. It is a feasible and safe way to control the quality of frying fats without the need of sofisticated equipments.

为什么使用“油试剂” ?

“油试剂”是一种比色测试剂，在短短的两分钟之内便可测出煎炸油中的极性化合物。无需使用任何复杂的设备， 即可控制煎炸油的质量. 。成本低廉， 产品安全，操作简单， 使用方便。

INSTRUTIONS OF USE
1. Open the tube containing the blue reagent.
2. Proceed a) or b)
a) Pour the oil sample at room temperature up to the lower part of the label of the tube. Put the open tube in a microwave (use a small glass or something similar to prevent the tube from falling) and heat from 5 to10 seconds at maximum power. If you do not have a microwave, heat some water and dip the tube properly closed until the mixture is dissolved.
b) Place the tube in the anti-burn holder and pour the warm oil sample (at least 60 ºC) up to the lower part of the label. Wait a few seconds and close the tube tightly with the cap and remove the anti-burn holder. If the sample does not reach the temperature required to melt the blue reagent, follow option a).

3. Shake the tube well (for a minute) in order to produce a uniform mixture (the color changes when the oil is mixed with the reagent).
4. Allow the mixture to settle for 2 minutes. Hold the tube vertically near a source of light and compare the obtained color to the color scale.
5. At the end of the reaction, the mixture (fat and reagent) solidify.
6. If the mixture reaches color 4 (17% to 23%), be extremely careful, as it is quite close to the 25% legal limit

使用说明

1. 打开装有蓝色试剂的试管。
2. 按照a)和b)步骤操作

a)在常温下将油样品倒入该试管，油量应高于试管标注的最低刻度。然后把敞口的试管放入微波炉内

(用玻璃或类似的小物件固定，以防止试管倾倒)，微波炉调至最大功率，加热5到10秒钟。如果没有微波炉，可将水加热，然后将密封好的试管浸入热水中，直到混合物溶解为止。

b) 将测试试管置于防热夹，倒入热的油样品（至少60摄氏度

)至试管标注刻度之上。几秒钟后，用盖子把试管封闭好，然后从防热夹上取下试管。假如油样品因没有达到所需温度而未能溶于蓝色试剂，重复a)步骤。

3. 同时摇晃试管（一分钟），使混合物充分均匀(

当油和蓝色试剂混合后，混合物的颜色也随之变化）。

4. 然后将混合物沉淀两分钟。将试管垂直地靠近灯光，把所得到的混合物颜色和色标进行对比。
5. 在反应的后期，混合物（油脂和试剂）会产生凝固。
6. 如果混合物颜色达到颜色4（17% 到23%)，

就应该特别注意，因为这已非常接近25%的法定界限。