

Is there a Problem with Plastics?

Is there a problem using **PET** bottles for packaging oils? The short answer is NO! From time to time I read articles about plasticizers such as Dibutyl Phthalate in plastics. We know that plasticizers are likely to leach from plastic into food, especially oily foods and therefore should be avoided. PET does not contain plasticisers. On the other hand, plasticisers such as the phthalates are added to hard, brittle plastics such as PVC (Poly vinyl chloride) and Polystyrene to make them pliable, so quite often writers take a broad brush and label all the plastics as if they all required plasticizers, when such is not the case.

A brief overview of plastics in common use:

- PET (**1** in the triangle – discovered in 1941) is the preferred plastic for soft drink bottles, oil bottles and jars. It is preferred because of its inertness, flexibility and clarity.
- HDPE (**2** in the triangle – discovered in 1933) is High Density Polythene, commonly used for milk bottles. It is translucent in appearance.
- PVC (**3** in the triangle – discovered in 1937) is Poly Vinyl Chloride, commonly used for plastic hoses and pipes. It has clarity but requires plasticizers.
- LDPE (**4** in the triangle – discovered in 1933) is Low Density Polythene commonly used for rubbish bags.
- PP (**5** in the triangle – discovered in 1952) is Polypropylene, commonly used for bottle caps because of its toughness and its inertness. More expensive than HDPE.
- PS Polystyrene(**6** in the triangle – discovered in the 1950s) is commonly used for packaging materials and cosmetic cases. It is clear and bright in appearance and requires plasticizers.
- NYLON (discovered in the 1930s) is a polyamide plastic and one of the best. Unfortunately, it is expensive and not easy to mould into bottles. Nylon and all other plastics such as Polycarbonate "babies bottles" and Teflon for coating frypans are number **7**.

From all the studies on toxicity, PET stands out as a highly acceptable plastic for use in food and drinks; tough, nonbreakable and with no evidence of leaching minute substances into oily contents on storage over considerable time periods.

Recycling has proven difficult. The biggest problem is the sorting of plastic waste as it is labour intensive. Recycled plastics are being used for non food applications such as plastic pallets, park benches and a unique process of lamination whereby new plastic is used on the food contact inside of a bottle and recycled plastic on the exterior.

Biodegradable Plastics. Considerable work is being done to make plastics biodegradable. Apart from the starch based resins, an additive called Bio-Batch results in total biodegradability in landfills where 94% of most plastics end up.

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