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Turkish Plastics Industry Foundation

Endocrine Disruptors

- **Chemical safety is paramount**

PAGEV, together with a majority of stakeholders, support the WHO scientific definition of an endocrine disruptor as *"a substance or mixture that alters function(s) of the endocrine system and consequently causes adverse effects in the intact organism, or its progeny, or (sub)-populations"*. Regulatory measures however may not be needed for all substances identified on the basis of such a definition. Why? Because it can be that the harmful effect observed during testing does not occur in 'real life'. It is therefore crucial to have a closer look at those effects: how potent, irreversible or severe are they? These are questions that need to be answered in order to best identify and regulate harmful substances.

- **Identifying endocrine disruptors: Do not judge a book by its cover**

Scientific debates are frequent and often rewarding. Controversial debates however, can make good policy decisions difficult. The plastics industry attaches a vital importance to scientific data and their use in policy making. We therefore work together with all stakeholders to use world-wide accepted scientific, transparent and harmonised procedures to distinguish non-conclusive evidence from evidence regulators can use.

- **Regulating endocrine disruptors: The dose still makes the difference**

Certain natural substances can interact with the endocrine system but would only cause adverse effects at doses that are never reached in real life. Below these doses, these products can be consumed without concern. The same applies for synthetic substances which have similar effects: for these substances, safe doses are set far below the level at which any effect can be measured. Some scientists however claim that there are no thresholds below which an endocrine disrupting substance can be considered safe. These claims remain hypothetical since reported low dose effects could not be reproduced or confirmed by more comprehensive studies. Most conclusive scientific results so far show that thresholds can in principle be set for EDs.

Key recommendations:

1. Distinguish endocrine disruptors (EDs) from endocrine active substances

A substance should not be identified as an ED only because it interacts with or impacts the hormonal system. An ED is a substance which causes *adverse* effects via that system.

2. Make sure regulation considers the characteristics of adverse effects

In order to identify EDs of concern, regulation must also take into account the characteristics of the adverse effects that were observed during testing. Is the effect powerful, severe, or irreversible? Is there a link between the substance and the adverse effect? If these characteristics were to be left out, it would be difficult to differentiate substances for which regulation is needed from those with the same low endocrine potency as in carrots.

3. Allow science to set thresholds for endocrine disruptors

Conclusive research shows that thresholds can be set for EDs. For this purpose, each substance needs to be considered on a case by case basis. In most cases a threshold will be set. Exceptionally, it may not be possible. In any case, regulation should not pre-empt the outcome of the assessment.