

August 27, 2026

Comments on Draft Indian Standard PCD 21 (33814) WC, Plastics Feeding and Drinking Containers, Accessories and Cutleries for Child Use – Specification

Dear Madam or Sir,

The [Food Packaging Forum Foundation \(FPF\)](http://foodpackagingforum.org) welcomes the opportunity to comment on Draft Indian Standard PCD 21 (33814) WC, Plastics Feeding and Drinking Containers, Accessories and Cutleries for Child Use – Specification. FPF is a non-profit, independent, and science-based research and communications organization working at the science-policy interface, with expertise in hazardous chemicals in food contact materials (FCMs).

FPF appreciates the efforts of BIS to develop requirements for feeding and drinking containers, accessories, and cutleries intended for child use. Considering the scientific evidence on their known hazards, we particularly welcome the prohibition of BPA, PVC, and 6PPD, as well as the inclusion of migration testing requirements and specific migration limits for selected substances. These measures represent important steps toward improving the safety of products intended for infants and children.

However, given the latest science evidence on food contact chemicals and the particular vulnerability of children to chemical exposures, the BIS could further strengthen the chemical safety provisions of the draft standard. We respectfully offer the following comments for consideration to better protect India's children.

1. Expand consideration of chemicals beyond the limited list currently specified

The draft standard prohibits BPA and establishes migration limits for a small number of heavy metals and DEHP. It also restricts 6PPD in certain rubber and silicone components.

While these provisions are valuable, they address only a small fraction of the known hazardous chemicals that may be present in plastic FCMs. Plastic feeding and drinking products can contain a wide range of intentionally added substances, including plasticizers, antioxidants, stabilizers, catalysts, processing aids, lubricants, pigments, and other additives.

According to our free and publicly available FCCmigex database, hundreds of different chemicals have been reported to migrate from plastic FCMs into food or food simulants. For olefin-based plastics alone, including polypropylene and polyethylene materials covered by this draft standard, more than 500 distinct migrating chemicals have been identified in the published scientific literature. Such substances include not only DEHP

but also other phthalates and numerous additional food contact chemicals of concern.

To better protect public health, BIS may therefore wish to consider expanding the chemical scope of the standard beyond the currently listed substances and to consult existing scientific resources, such as FPF's [FCCmigex](#) and [FCCprio](#) databases, when identifying chemicals that warrant assessment or restriction.

2. Consider chemical groups rather than individual substances to avoid regrettable substitutions

The draft standard appropriately prohibits BPA. However, experience from FCM regulations around the world has shown that restrictions targeting individual chemicals may result in “regrettable substitutions” with structurally similar substances possessing comparable hazardous properties.

For example, BPA has been often replaced by other known hazardous bisphenols, while DEHP may be replaced by other hazardous phthalates. Such substitutions reduce regulatory effectiveness while providing limited health benefits.

The committee may therefore wish to consider implementing broader approaches that address chemical classes or groups of structurally related substances to provide more robust and future-proof protection of public health.

3. Consider cumulative exposures and mixture effects

The draft standard establishes limits for individual substances but does not appear to consider the potential health implications of simultaneous exposure to multiple chemicals migrating from the same article.

A growing body of scientific evidence indicates that combined exposures to multiple endocrine-disrupting and other hazardous chemicals can contribute to more adverse outcomes even when individual substances are present at concentrations below their respective regulatory thresholds.

Children may be exposed to multiple hazardous chemicals from numerous FCMs and consumer products throughout the day. BIS may therefore wish to explicitly consider cumulative exposures and mixture toxicity when developing this standard and related FCM requirements to reduce these preventable chemical exposures through FCMs.

4. Address non-intentionally added substances (NIAS)

The draft focuses primarily on known and intentionally used chemicals but does not appear to contain provisions addressing non-intentionally added substances (NIAS) in FCMs. NIAS can include impurities, reaction by-products, degradation products, contaminants, and oligomers present in finished articles.

Numerous scientific studies have demonstrated that thousands of NIAS may be present in complex FCMs such as plastics and migrate into food to contribute substantially to overall chemical exposure. Because many NIAS remain unidentified and inadequately characterized toxicologically, they present a significant challenge for chemical safety assessment.

The committee could consider incorporating requirements or guidance addressing NIAS as part of the overall safety evaluation of FCMs intended for children.

5. Consider releases of microplastics and nanoplastics (MNPs) during repeated use

The draft recognizes the importance of durability and includes ageing, autoclaving, migration, and repeated-use testing provisions.

However, repeated heating, sterilization, cleaning, abrasion, and normal use may also result in the release of MNPs from plastic products. A growing body of scientific evidence has identified feeding and drinking products as potential sources of such particles, particularly under conditions representative of repeated real-world use. These particles are plastics that contain the same chemicals as the original food contact material, and they are therefore a vector of any present hazardous chemicals into the body.

BIS could therefore consider revising the standard to address MNP releases, particularly for products intended for children.

Conclusions

We commend the committee for developing this standard and for including provisions addressing BPA, PVC, DEHP, selected heavy metals, and other known hazardous substances such as 6PPD, N-Nitrosoamines and N-Nitrosatables.

However, the available scientific evidence suggests that further strengthening of the chemical safety provisions is necessary. This could be achieved by expanding the range of chemicals considered, adopting broader approaches to groups of chemicals, considering mixture effects and cumulative exposures, addressing NIAS, and evaluating the implications of microplastic and nanoplastic releases.

To further improve the standard, the committee may wish to consider publicly available scientific resources that compile information on food contact chemicals and chemical migration, including FPF's [FCCmigex](#) and [FCCprio](#) databases.

Yours sincerely,

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