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# Bisphenol A: Update on the Food Directorate's Risk Management Commitments for Infant Formula

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Bureau of Chemical Safety  
Food Directorate  
Health Products and Food Branch



Canada 

### Background

Bisphenol A (BPA) was included in [Batch 2 of the Challenge](#) under the Federal Government's Chemicals Management Plan carried out by Health Canada and Environment Canada. On October 18, 2008, the Government of Canada released its final assessment report, including the Government's proposed risk management strategy, to ensure that Canadian's exposure to BPA is kept as low as possible, particularly for newborns and infants. As part of this overall BPA risk management strategy, one of the commitments was "To facilitate the assessment of proposed industry alternatives to BPA for use in infant formula can coatings". The Food Directorate's Bureau of Chemical Safety (BCS) has supported industry working toward developing BPA-free packaging materials for infant formula by prioritizing the safety assessment of BPA replacement options in food packaging applications. As part of this commitment, Food Directorate scientists have assessed the safety of approximately 25 BPA-free packaging materials and deemed them acceptable for use with powdered and liquid infant formula products.

### Current State

Following consultations with the major manufacturers of infant formula, the Food Directorate's Bureau of Chemical Safety confirmed that industry has abandoned or phased out the use of BPA-containing packaging for liquid infant formula. Given the timing of the transition to packaging materials manufactured without BPA and the shelf life of liquid infant formula products, it is expected that as of December 2014, Canadian consumers will not find any liquid infant formula products packaged in BPA-containing packaging on the Canadian marketplace. Health Canada's Food Directorate had previously confirmed that BPA was not detectable in canned powdered infant formula products available for sale in Canada.

In the first quarter of 2014, the Food Directorate's Bureau of Chemical Safety conducted a survey to ascertain the impact of its BPA risk management strategy on levels of BPA in liquid infant formula. Ten different liquid infant formula products marketed in Canada were analysed for BPA using the method previously developed by Health Canada scientists (*J. Agric. Food Chem.*, 2008, 56, 7919-7924). In brief, liquid infant formula samples were initially extracted with acetonitrile, followed by solid phase extraction, derivatization with acetic anhydride and analysis by gas chromatography-mass spectroscopy (GC-MS). The method detection limit (DL) was 0.29 ng/g (parts per billion). BPA was not detected in any sample of liquid infant formula above the DL. [Table 1](#) captures Health Canada's findings as a result of this survey.

**Table 1: Results of analysis of liquid infant formula samples for the presence of BPA**

<b>Manufacturer</b>	<b>Brand</b>	<b>Package Type</b>	<b>Type and Size</b>	<b>BPA level, ng/g</b>
Abbott	Similac Advance	High density polyethylene (HDPE) bottle	Ready to use, 945 mL	< DL
Abbott	Similac Expert Care	Two-piece metal can	Ready to use, 237 mL	< DL
Abbott	Similac Advance	Two-piece metal can	Concentrated, 384 mL	< DL
Abbott	Similac Special Care	Polypropylene (PP) bottle	Ready to use, 59 mL	< DL
Mead Johnson Nutrition	Enfamil A+	PP bottle	Ready to use, 59 mL	< DL
Mead Johnson Nutrition	Enfamil A+	Two-piece metal can	Concentrated, 385 mL	< DL
Mead Johnson Nutrition	Enfamil A+	PP bottle	Ready to use, 237 mL	< DL
PBM Nutritionals	Parent’s Choice	PP bottle	Ready to use 235 mL	< DL
Nestlé	Good Start	Tetra-pak	Concentrated, 385 mL	< DL
Nestlé	Good Start 2	Tetra-pak	Concentrated, 385 mL	< DL

Note:

It should be noted that the absence of any particular brand (product name) from this survey means only that the brand was not included in the survey. No particular inference should be drawn from the presence or absence of any brand.

### Conclusion

Health Canada's current findings from this liquid infant formula survey confirm that alternative packaging materials manufactured without BPA have been adopted by industry. As mentioned previously, Health Canada's Food Directorate had conducted an extensive [Survey of BPA in Canned Powdered Infant Formula Products](#) in 2009 and found that regardless of the type of packaging or brand of formula, BPA was not detectable in any sample.

Health Canada's Food Directorate scientists are able to conclude that with the measures taken to develop and adopt new packaging alternatives for infant formula products available for sale in Canada, the lowest level of BPA achievable in these products would be consistent with the method detection limit associated with these surveys.

Although Health Canada's Food Directorate scientists maintain that current BPA exposure from food packaging uses is not expected to pose a health risk to the general population, including newborns and infants, they anticipate in the foreseeable future that alternative BPA-free materials will gradually replace most of the existing BPA-based packaging materials for other types of canned food products. Additional surveys for canned foods will be conducted in the future to determine how industry use of these alternative packaging materials has impacted overall dietary exposure to BPA.

For more information on this topic, please contact the Food Directorate's Bureau of Chemical Safety. If you wish to contact the Bureau electronically, please use the words "**BPA infant formula**" in the subject line of your e-mail.

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