Talking Points: Nanoparticles in Australian Sourced Infant Formula

- The Australian Government takes concerns about food safety extremely seriously.

- Australia has a world class food safety system with all food required to be produced in compliance with Australia's domestic food legislation and the Australia New Zealand Food Standards Code.

- All infant formula products sold in Australia must meet stringent requirements set out in the infant formula standard in the Food Standards Code. This is one of the most comprehensive standards in the Food Standards Code and requires new food additives, nutritive and novel substances proposed to be used in infant formula to undergo a pre-market safety assessment.

- The recent report commissioned by Friends of the Earth claimed that nanoscale particles were detected in some infant formula products available for sale in Australia and New Zealand.

- Food Standards Australia and New Zealand (FSANZ) has reviewed the information provided in the Friends of the Earth study, including in consultation with independent scientific experts and the Scientific Nanotechnology Advisory Group.

- FSANZ has concluded there was no new evidence to suggest the products posed a risk to infant health and safety. FSANZ does not have safety concern with these products.

- The information from the Friends of the Earth testing does not provide sufficient evidence that the particles found in the study are intentionally engineered and deliberately added.

- It is important to also note that nano-size particles may not be the result of intentional addition (e.g. as an additive), some are naturally occurring and others may be produced during processing.

- Furthermore, FSANZ advises that the specific nano-particle - hydroxyapatite - is soluble in acidic environments such as the stomach, so small amounts in infant formula are dissolved during digestion to release calcium and phosphate. These are essential minerals that are required to be in infant formula products.

- Infant formula exports from Australia are regulated by the (Australian) Department of Agriculture and Water Resources. Establishments that produce / process infant formula for export must be registered by the department.

- For establishments exporting infant formula to China, establishments must also meet China's standards and other requirements, such as approvals by relevant Chinese authorities. The department will not issue export certificates for products that do not meet relevant requirements and/or are not produced by export registered establishments.

- Chinese regulators and consumers should not be alarmed by this report or concerned about the safety of Australian infant formula products. Australian infant formula is consumed in Australia and around the world and is highly regarded for its safety.

If asked about research into nanoparticles in infant formula produced by other countries:

- Arizona State University research in May 2016 found nano-particles in six out of six US infant formula brands tested.

If asked about technical details on the claimed effect of these nanoparticles, FSANZ notes that:

- Hydroxyapatite is soluble in acidic environments such as the stomach, so small amounts in food are likely to dissolve to release calcium and phosphate. These are essential minerals that are required to be in infant formula products.
- Calcite has low solubility in the gastrointestinal tract regardless of whether it is in nanoscale form or in larger particles. The small fraction that is absorbed is likely to be in the form of calcium.
- Silicon dioxide has been used safely as a food additive in other foods in Australia, and internationally, for many years.
- Nanoscale materials are not new. Food is naturally composed of nanoscale sugars, amino acids, peptides and proteins, many of which form organized, functional nanostructures. For example, proteins are in the nanoscale size range and milk contains an emulsion of nanoscale fat droplets. Humans, including infants, have consumed these particles in foods throughout evolution without evidence of adverse health effects related to the materials' nanoscale size.
- Nano-size particles may not be the result of intentional addition (e.g. as an additive), some are naturally occurring and others may be produced during processing.
- The presence of something, whether on the nanoscale or not, in a food that is not approved under Code does not necessarily mean a food is unsafe.