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# Update on Nanomaterial Assessment under CEPA

March 10<sup>th</sup> 2022

## Society of Cosmetic Chemists (SCC) – ON Chapter – Regulatory Update Meeting

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New Substances Assessment and Control Bureau

Health Canada



CHEMICALS  
MANAGEMENT  
PLAN

PLAN DE  
GESTION DES  
PRODUITS CHIMIQUES

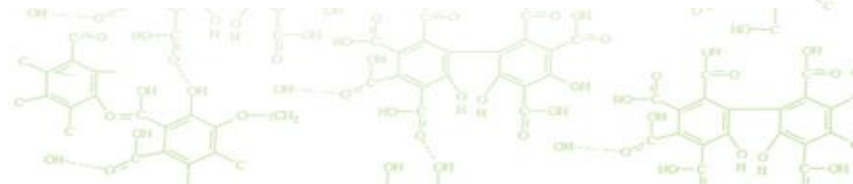
Canada

# What are Nanomaterials (NMs)?

Health Canada Working Definition: any manufactured substance or product and any component material, ingredient, device, or structure is a NM if:

- ❖ It is at or within the nanoscale (1 to 100 nm, inclusive) in at least one external dimension, or has internal or surface structure at the nanoscale, **or**;
- ❖ It is smaller or larger than the nanoscale in all dimensions and exhibits one or more nanoscale properties/phenomena.

Under Canadian Environmental Protection Act (CEPA), a substance is evaluated as a NM if 10% or more (by number) or 1% or more (by mass) of its primary particles are in 1-100 nm size range



# Risk Assessment of Nanomaterials

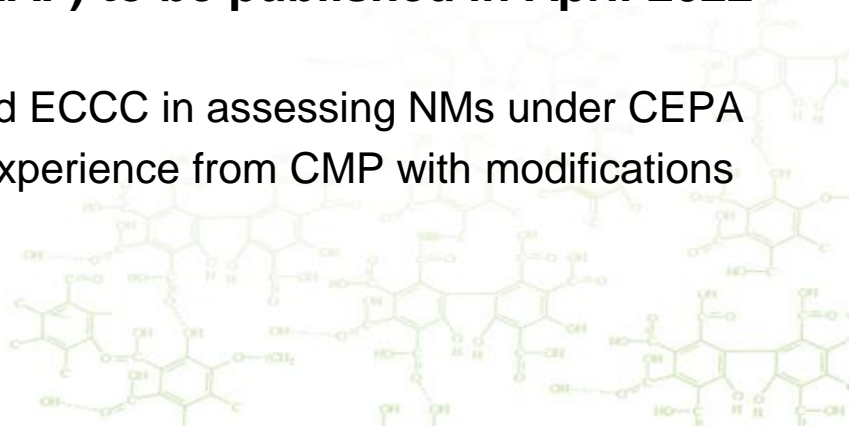
New Substances Program has **conducted pre-market assessment of ~60** nano/potential-nano substance notifications received through the New Substances Notification Regulations (NSNR) since 2015

**Further 53 individual chemical substances listed** on the CEPA “Domestic Substances List” (DSL) have been identified as priorities for risk assessment

These substances are in-commerce and the nanoforms have not been assessed

**Nano-specific risk assessment framework (RAF) to be published in April 2022 for a 60-day public consultation**

- ❖ Communicates approach used by HC and ECCC in assessing NMs under CEPA
- ❖ Built on risk assessment principles and experience from CMP with modifications



# Nanoscale forms of Substances on the DSL

| NM type           | No. of CAS RN |
|-------------------|---------------|
| Aluminum oxides   | 4             |
| Bismuth oxide     | 1             |
| Calcium compounds | 6             |
| Cerium oxide      | 1             |
| Copper oxide      | 1             |
| Iron oxides       | 7             |
| Magnesium oxides  | 2             |
| Manganese oxides  | 3             |
| Nanocelluloses    | 11            |
| Nanoclay          | 1             |
| Nickel oxide      | 1             |
| Silicas           | 11            |
| Silver            | 1             |
| Titanium dioxide  | 1             |
| Zinc oxide        | 1             |
| Zirconium oxide   | 1             |

## Uses identified include:

- Adhesives and sealants
- Arts and crafts
- Automotive care products
- Cleaning and furnishing care
- Food and beverage
- Drugs and **natural health products**
- **Dyes and pigments**, including ink/toner & colorants
- Electrical and electronics
- Lubricants and greases
- **Personal care products**
- Paints and coatings
- Pulp and paper products
- Toys, playground and sporting equipment
- Petroleum/coal extraction, products/manufacturing
- Plastics and plasticizers
- Non-metallic mineral production

# HC Data Gap Analysis and Web Updates

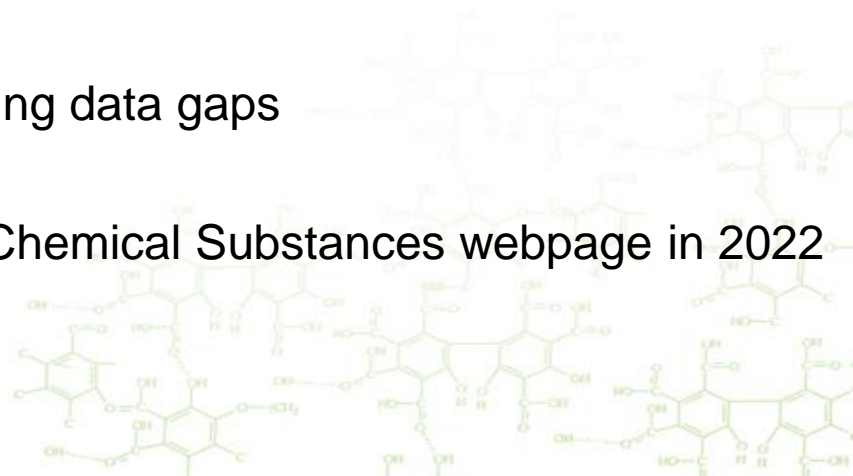
Published in October 2021 to the [CEPA Registry Site](#)

Describes approach used by Health Canada to analyze available data/information for 53 DSL nanomaterials previously reported as being in-commerce in Canada through mandatory s.71 survey

Includes table where stakeholders may find specific gaps identified for the risk assessment of their substance of interest

NS Program looking for stakeholder input on filling data gaps

Consolidation of CMP nanomaterial content to Chemical Substances webpage in 2022



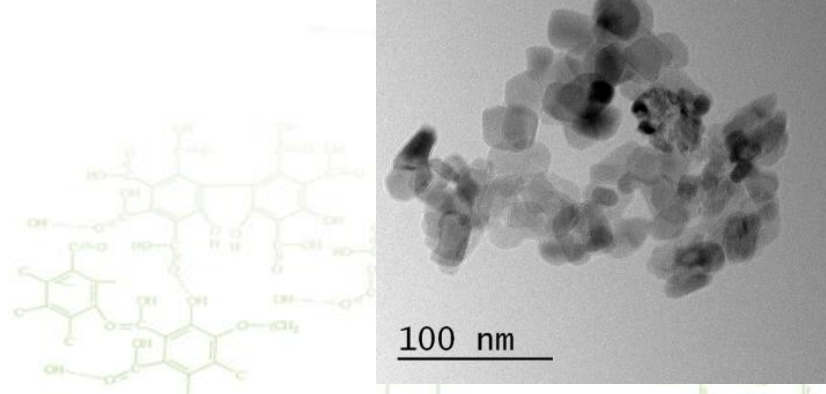
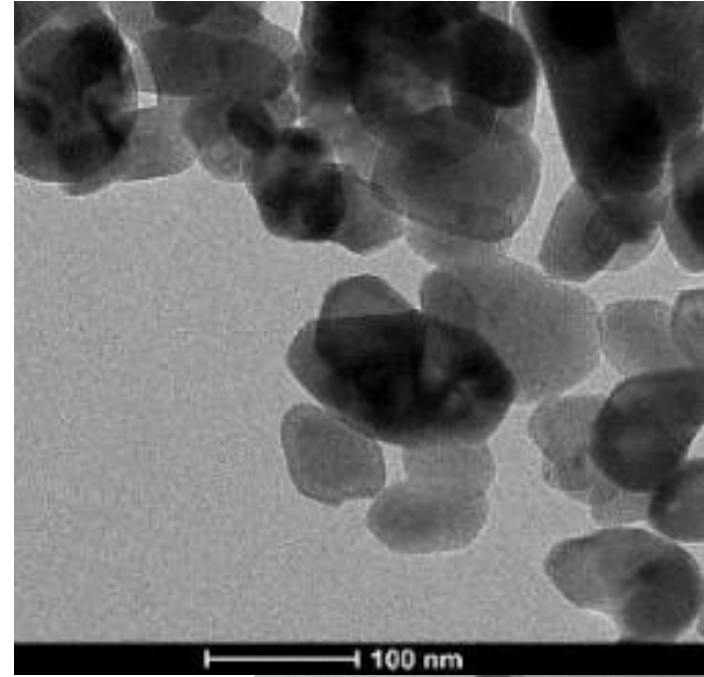
# Information Gathering and First Risk Assessments

Initiating first assessments of DSL NMs identified in s.71 survey

Titanium Dioxide ( $\text{TiO}_2$ ) and Zinc Oxide ( $\text{ZnO}$ ) have been prioritized highest

Follow-up request for additional information was sent out in October 2021 to previous respondents to the 2015 mandatory s.71 survey for entities indicating that they were importing or manufacturing  $\text{ZnO}$  or  $\text{TiO}_2$  at the nanoscale.

Preparations underway for broader information gathering on remaining DSL nano priorities





# Thank You

## **New Substances Program Website:**

<https://www.canada.ca/en/environment-climate-change/services/managing-pollution/evaluating-new-substances.html>

## **Nanotechnology Generic Email for Inquiries:**

[nanotechnology-nanotechnologie@ec.gc.ca](mailto:nanotechnology-nanotechnologie@ec.gc.ca)

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