

## Rapid Antigen Tests: Executive Summary

This executive summary was created to bring awareness to emerging issues pertaining to the safety and efficacy of COVID-19 rapid antigen test kits (RAT). Concerns include misuse, toxic chemical components of RATs and their impact on personal health & the environment, as well as test limitations. *'Rapid Antigen Test— Cease and Desist'* and *'Rapid Antigen Test — Fact Sheet'* documents demonstrate concerns of the widespread dispersal of these kits within communities across British Columbia.

### **1. Rapid Antigen Tests for Medical Professional and/or Point of Care (POC) Use Only:**

According to COVID-19 rapid antigen test kit product inserts, these medical products are intended for use by **healthcare professionals in clinical laboratory and/or 'Point of Care' (POC) settings only**. This is required to achieve accurate test results. Precautions to be taken when utilizing these kits in a home setting have not been adequately communicated to lay persons who may now be in possession of these rapid antigen tests, including the following:

- The use of **personal protective equipment** such as laboratory coats, disposable gloves and eye protection when running tests and handling specimens.
- **Specific training** is recommended if operators are not experienced with specimen collection and handling procedures.
- **Safe disposal** in biohazard container is required.

### **2. Rapid Antigen Test Kit Ingredients Pose Significant Health Concerns:**

COVID-19 rapid antigen tests contain harmful chemicals within the extraction buffer and the nasal swab. These include: sodium azide, ProClin-300, commonly found but not always disclosed in the extraction buffer. The ethylene oxide and an undisclosed bioluminescent material, visible under ultraviolet lighting.

\* Refer to the *'Rapid Antigen Test — Fact Sheet'* for an in-depth presentation of toxic chemical exposure concerns.

### **3. COVID-19 Rapid Antigen Test Kit Ingredients Pose Significant Environmental Concerns:**

Sodium azide, ProClin-300, ethylene oxide, and the undisclosed bioluminescent ingredient within the test kits pose an environmental hazard, and are classified as 'biohazardous waste'. Disposing of test kit components in the garbage is considered **illegal dumping**.

- **Disposal concerns:** local pharmacies (Shopper's Drug Mart and Pharmasave) have confirmed there are no standardized protocols for the collection and disposal of RATs within the community. Thus, these test kits are currently being discarded via regular waste management. These test kits pose a significant environmental harm through a compounding effect.
- The **safe disposal of test equipment**, via biohazard collection, which should follow local, regional, and national regulations. These tests **CANNOT** be thrown out with regular garbage. This is confirmed through statements released by [BCCDC here](#).

### **4. Limitations of COVID-19 Rapid Antigen Test Kits:**

COVID-19 rapid antigen test kits do not produce reliably accurate results when utilized in the following settings:

- In a population that is vaccinated against COVID-19 (87.5% of British Columbians ages 5+ are fully vaccinated)
- In patients without signs of respiratory symptoms (i.e., asymptomatic)
- On specimens from individuals infected with variants of SARS-CoV-2 (i.e., delta, omicron, BA.2, XE, etc.)