

GUIDELINES FOR SUBMITTING INFLUENZA VIRUS ISOLATES TO NML (WINNIPEG)

The following is a recommendation for the effective collaboration of Canadian provincial and other laboratories with the National Microbiology Laboratory (NML). The Influenza Strain Characterization Surveillance Program (A) is essential for early identification of novel pandemic influenza strains and for contribution to global influenza monitoring and WHO annual flu vaccine selection. The Reference Antiviral Susceptibility Testing (B) also contributes to the overall prevention and control of influenza viruses. NML is Canada's WHO National Influenza center and to contribute to WHO's global influenza surveillance program representative isolates submitted by its stakeholders will be sent to the WHO influenza collaborating Center (CDC, Atlanta) for further characterization.

Please ensure that you are using the proper submission form for your request. This is important to avoid confusion with requested tests and to avoid delay in turn around time.

Submission forms for all testing for Influenza and Respiratory Virus testing are available at the Guide to Services site: <https://cnphi.canada.ca/gts/laboratory/1013>

A) Influenza Strain Characterization (Subtyping) Surveillance Program

In order to ensure the relevance of test results for the surveillance program, isolates should be sent promptly. Therefore, samples received three months after collection date will not be tested unless prior arrangement has been made with section Chief (see contact info below)

-Complete the WHO Influenza Program (Antigenic Subtyping) submission form available at the Guide to Services site: <https://cnphi.canada.ca/gts/laboratory/1013>

Note: Representative isolates submitted for this surveillance program will also be sequenced and tested for routine antiviral susceptibility testing as part of our surveillance program. Please do not submit a separate drug susceptibility submission form. The sequence data will be submitted to GISAID.

- A volume of at least 1.5 - 2.0 ml of virus isolate with a high HA titer (≥ 16) is required for analysis. Note: if HA titer is unknown, send inoculated cell culture that exhibits 3+ CPE. Scrape cells into supernatant and ship to NML. Isolates are best shipped frozen on dry ice.

- Virus isolates for subtyping obtained under the following conditions should be sent to NML. Please do not send original specimens for this test.

1. Preseason isolates and the first isolates of season. In addition, laboratories are encouraged to send NML 10% of their subsequent isolates.
2. Isolates from persons whose influenza illness is related to international travel
3. Isolates collected during peak activity, usually mid-January, that are representative of the season

4. Late season isolates after major outbreak activity is over
5. Isolates of a type or subtype present as a minor component (10% or less) of the year's epidemic.
6. Influenza isolates that cannot be subtyped.
7. Isolates from persons receiving antiviral agents or from their contacts who become ill
8. Isolates obtained during in-depth investigations of outbreaks occurring in immunized populations
9. Isolates from cases of suspected animal-to-human transmission of influenza virus

B) Reference Antiviral Susceptibility Testing

- **Complete the Drug Susceptibility Testing submission form available at the Guide to Services site:** <https://cnphi.canada.ca/gts/laboratory/1013>

Note: This form should be used for specimens requiring diagnostic drug susceptibility testing only. Please do not use this form for the routine antiviral susceptibility surveillance program since representative isolates submitted for the Influenza Strain Characterization (Subtyping) Surveillance Program will also be tested for drug susceptibility.

- Virus isolates are required for Antiviral Susceptibility testing. Please do not send original specimens for this test.

SHIPPING OF ISOLATES TO NML

Notification of Incoming Specimens Form

In order to give us advance notification of the arrival of specimens, fill out the fax form and fax it to us on the day of shipment.

Submission Forms

Laboratory and epidemiologic information about the isolates must be provided using the required submission forms on the Guide to Services site:

<http://open.cnphi-rcrsp.ca/gts/faces/public/laboratory.xhtml?labId=1013&lang=en>.

Shipping Temperature

If the viral isolate is frozen, it should be shipped with dry ice. **Caution:** parafilm tubes carefully so that CO₂ does not escape into the tube and inactivate the virus. A frozen viral isolate is preferred, but if a fresh culture is grown, shipment is best at 4° C

Specimens

Send all specimens in sterile, screw-capped (with gasket), polypropylene, 2 mL tubes. Multiple tubes may be submitted if necessary. Please do not send specimens in bijou bottles or glass tubes.

Address

Influenza and Respiratory Viruses
National Microbiology Laboratory
Canadian Science Centre for Human and Animal Health
1015 Arlington Street
Winnipeg, Manitoba R3E 3R2

CONTACT PERSON

Any questions regarding shipping, selection of isolates to ship, laboratory procedures used in the identification of field strains and serologic diagnosis as well as results on isolates submitted should be directed to:

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