
August 2010

Norovirus Outbreak Testing Update

To health care providers:

Effective October 2010, the Ontario Agency for Health Protection and Promotion (OAHPP) public health laboratories (PHL) will use Ridaquick Norovirus Immunochromatographic Test (ICT) as a rapid screening tool for gastroenteritis outbreak samples to decrease the turn around time during peak season. This tool was chosen after a careful evaluation of two different antigen detection methods to rapidly detect Norovirus in outbreak faecal samples.

Recommended Specimen

Collect faecal samples in a sterile container (with no additives or preservatives) as soon as possible after onset of illness. Up to 5 samples/outbreak will be tested.

Sample Testing Algorithm

Rapid Norovirus antigen detection kits available commercially are of excellent specificity but lower sensitivity when compared to rRT-PCR. The lower sensitivity renders the test not clinically useful for testing sporadic cases of gastroenteritis. In outbreak situations, where multiple samples are submitted, the utility of the rapid antigen detection methodology increases and testing samples from multiple patients increases the possibility of detecting Norovirus when present.

Further testing (EM, virus culture or Norovirus RT-PCR) will be required on outbreak samples where no virus is detected by rapid testing. Due to the excellent specificity of the ICT rapid test, once Norovirus is detected, it will be reported.

If Norovirus is detected from two different samples from the same outbreak, no further outbreak testing will be required.

Norovirus Outbreak Testing Update (Continued)

The following combination of results and interpretations may occur:

| ICT | EM | RT-PCR | Interpretation |
|------------|-----------|-----------------------------|---|
| Negative | Negative | Not detected | No Norovirus detected |
| Negative | Negative | Detected | Norovirus detected: Viral load below EM/ ICT detection limits |
| Negative | Positive | Not done | Norovirus detected by EM |
| Not done | Not done | Detected | Norovirus detected by RT-PCR |
| Invalid | Negative | Inhibition or Indeterminate | ICT or RT-PCR reaction can not be interpreted |
| Positive | Not done | Not done | Norovirus detected by ICT |

For further information:

- Electron Microscopy Laboratory at **416-235-6121**, or contact your local OAHPP laboratory.
- OAHPP Laboratory Helpline **1-800-640-7221**
- For the OAHPP Specimen Collection Guide and previous Lababstracts refer to <http://www.oahpp.ca/publichealthlaboratories.php>