

## The easy virus detection using ultracentrifuge and electron microscope

CS-FNX series and CS150NX micro ultracentrifuges for separation / S100AT3 fixed angle rotor

The detection of norovirus is most famous in the virus detection using ultracentrifuge and electron microscope. Norovirus (formerly “Norwalk agent”) is an RNA virus (taxonomic family Caliciviridae) that caused approximately 90% of epidemic nonbacterial outbreaks of gastroenteritis around the world. Norovirus has approximately 7,500 bases and its size is 30–38 nm of a regular icosahedron, Norovirus is rapidly inactivated by either sufficient heating or by chlorine-based disinfectants, but the virus is less susceptible to alcohols and detergents, because it does not have a lipid envelope.

Following is our new technique that can perform the detection of the norovirus in the sample of only 100 $\mu$ L .

### Description

Rotor: S100AT3 fixed angle rotor (20 tubes of 0.23 ml)

Speed: 60,000 rpm (Max. centrifugal force: 157,000 xg)

Time: 30 min.

Temperature: 4°C

Acceleration: 7 (Rather slowly)

Deceleration: 7 (Rather slowly)

Centrifuge tube: 0.23 PC tube

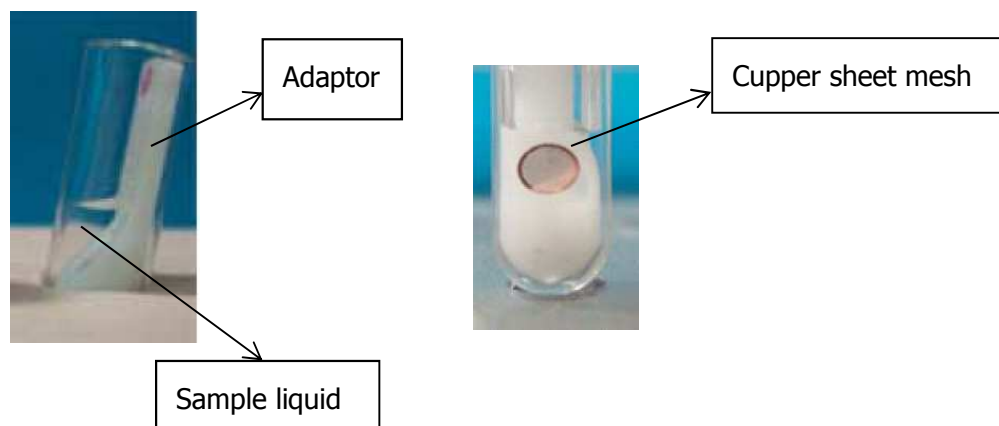
Sample volume: 100-150 $\mu$ L

Adaptor:

Name: 0.23 adaptor

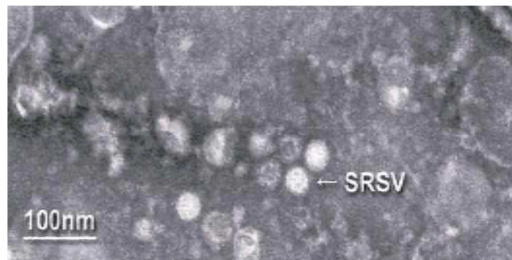
Material: Polyacetal (Polyoxymethylene) resin

Copper sheet mesh (Diameter: 4mm) (Nisshin EM Co., Ltd. Tokyo):



There are two types of ultracentrifuges: the floor type (CS-FNX series, CS-GXII series, CS-GXL series and CS-GX series) and the desktop type (CS150NX). You can use either type.

Detector: Transmission electron microscope



Observation example by a transmission electron microscope

### Machine appearance



CS-FNX Series



S100AT3 fixed angle rotor



CS150NX

If you have any inquiry of this application or products, please contact us through our web site.

<http://www.hitachi-koki.com/himac/>

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