Hepatitis A virus (HAV) by PCR

Ultraseensitive qualitative detection of hepatitis A virus by reverse transcription coupled real time PCR
ELISA detection of total antibodies to hepatitis A virus in nonhuman primates

Hepatitis A is a contagious liver disease that results from infection with the hepatitis A virus (HAV), a picornavirus. Infected individuals develop symptoms ranging in severity from mild illness lasting a few weeks to severe illness lasting several months. Hepatitis A is usually spread when a person ingests fecal matter from an infected person, through contact with contaminated objects, food, or drinks. Infected persons may develop fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice. The host range for hepatitis A virus is limited to human and several species of nonhuman primates. Spontaneous hepatitis A infection has been reported to occur in captive non-human primates including the great apes (chimpanzee) as well as Old World (cynomolgus, African vervet, stump-tailed) and New World (aotus) monkeys. The frequent detection of anti-HAV antibody in the sera of newly captured individuals of these species shows that infection with this virus is common in their natural habitat.

Serological diagnosis of hepatitis A infection relies on detecting an elevation of IgM level in patient's blood. However, serology cannot be easily applied to environmental monitoring of contaminated water and sewage samples. Additionally, molecular detection by PCR is highly sensitive and specific (Apaire-Marchais et al., 1994).

Utilities:
Help confirm the disease causing agent
Help ensure that animal colonies are free of Hepatitis A
Early prevention of spread of this virus among a colony
Environmental monitoring for this virus
Minimize personnel exposure to this virus
Safety monitoring of biological products and vaccines that derive from primates

References:

Specimen requirement: 0.5 ml whole blood in EDTA (purple top) or ACD (yellow top) tube, or 0.5 ml feces, or 2 rectal swabs, or 0.5 ml serum or plasma, or 0.5 ml fresh or frozen liver tissue, or 0.5 ml water or environmental samples.

For specimen types other than those listed here, please call to confirm specimen acceptability and shipping instructions.

For all specimen types, if there will be a delay in shipping, or during very warm weather, refrigerate specimens until shipped and ship with a cold pack unless more stringent shipping requirements are specified. Frozen specimens should be shipped so as to remain frozen in transit. See shipping instructions for more information.

Turnaround time: 2 business days

Methodology: Qualitative reverse transcription coupled real time PCR

Normal range: Non detected