

Always wear protective clothing when handling specimens from suspected VHF cases. Label all tubes carefully with name, date of collection and hospital number. Provide a patient summary or fill out a clinical signs and symptoms form (Annex 12). Contact your district officer for special instructions about collecting and shipping specimens.

Diagnostic Test	Samples required	Preparation & Storage	Shipping	Viruses to be confirmed
ELISA (Serology) Detects: — Viral antigen — IgM and IgG antibody	Whole blood* Serum or plasma Acute and convalescent**	Freeze or refrigerate (as cold as possible)	Frozen on dry ice or ice packs or both****	Ebola Lassa CCHF Rift Valley Marburg Yellow fever
PCR Detects: DNA, RNA (genetic material) from virus	Whole blood or clot*** Tissues (fresh frozen) Serum/plasma	Refrigerate or freeze Freeze	Frozen on dry ice or ice packs or both****	Ebola Lassa CCHF Rift Valley Marburg Yellow fever
Immunohistochemistry (liver) Detects: Viral antigen in cells	Liver biopsy from fatal cases	Fix in formalin (can be stored up to 6 weeks)	Room temperature (Do not freeze)	Ebola Lassa CCHF Rift Valley Marburg Yellow fever
Immunohistochemistry (skin) Detects: Viral antigen in cells	Skin biopsy from fatal cases (any site)	Fix in formalin (can be stored up to 6 weeks)	Room temperature (Do not freeze)	Ebola Lassa
Immunohistochemistry (other tissues) Detects: Viral antigen in cells	Tissue biopsy from fatal cases (other tissues, spleen, lung, heart, kidney)	Fix in formalin (can be stored up to 6 weeks)	Room temperature (Do not freeze)	<i>Possible detection of</i> Ebola, Lassa, CCHF, Rift Valley, Marburg, Yellow Fever

- * Whole blood can be used for enzyme-linked immunosorbent assay (ELISA) and may be frozen. Do not centrifuge suspected VHF specimens because this increases risk to the lab worker. If serum specimens have already been prepared these can be used. Place specimens in plastic tubes for shipping and storage and be sure that the tubes are sealed and properly labelled.
- ** Collect acute-phase specimen when patient is admitted to hospital or diagnosed as suspected case and collect convalescent-phase specimen at death or when discharged from the hospital.
- *** Whole blood or tissue is preferred, although serum or plasma may provide results.
- **** Use both ice packs and dry ice to provide best results. If dry ice or ice packs are not available, sample may be shipped at room temperature and still provide valid results in most cases.