**General**

* Great care must be exercised to ensure the safety of staff and others when dealing with novel respiratory pathogens where little is known about transmissibility and/or virulence. Strict adherence to sample collection, handling and biosafety protocols is essential.
* Well-established protocols can be used to handle samples from patents with suspected or confirmed pathogens of interest (currently novel coronavirus MERS-CoV and influenza A/H7N9 & A/H5N1).
* Trusts should follow the usual sources of advice regarding laboratory containment of these pathogens. In an emerging infection this may include information from ACDP and PHE, which would support a local risk assessment and SOP covering the handling of such samples.
* All samples need to be processed as soon as they are received in the lab
* All samples should have been received marked with a minimum data set of name, date of birth, date of sample and sample type. Please ensure this data is present and then recorded on the ISARIC laboratory record form.
* Red ISARIC RESEARCH labels, if provided, should be attached to all samples and secondary packaging before forwarding to PHE or HPRU labs. When labels are not available please ensure secondary containers are distinctly marked “ISARIC RESEARCH” preferably using a thick red marker pen.

**Expected Serial Blood Samples**

* 1 x 3ml EDTA blood tubes (purple-top)
* 1 x 3ml plain clotted blood (red-top)
* 1 x 9 ml Tempus tube (blue-top)

**EDTA tube**

* Centrifuge the EDTA tube at 1500 x g for 10 minutes at 4°C
* Use a pipette with disposable sterile tips to make 3 aliquots of plasma supernatant of approx. equal volume
* **Avoid disturbing or touching the blood pellet with the pipette tip**
* **DO NOT discard** **the primary EDTA tubes** containing blood pellets and **DO NOT discard** **the EDTA tube caps**
* It is expected that a maximum of 3 x 500ul plasma supernatant aliquots can be made from a 3ml EDTA tube
* Each aliquot should be in an individual, screw-top (with silicone o-ring) Cryovial
* Do not overfill the vials and ensure that the lids are completely screwed down after filling
* Ensure secondary containers for these aliquots clearly identifies them as **PLASMA** and ISARIC RESEARCH, as once made they are indistinguishable from serum aliquots.
* Securely replace the cap on the EDTA tube containing the pellet/any remaining plasma and ensure that the tube has been labelled (labelling should have taken place at the time of sampling)
* Freeze all aliquots and the original EDTA tube at -80°C (or at -20°C if a -80°C freezer is not available)

**Plain clotted blood (red-top) tube**

* The clotted blood sample should have been allowed to stand for 30 minutes after sampling took place
* Centrifuge the clotted blood tube at 1500 x g for 10 minutes at 4°C
* Use a pipette with disposable sterile tips to make 3 aliquots of serum supernatant of approx. equal volume
* **Avoid disturbing or touching the blood pellet with the pipette tip**
* It is expected that a maximum of 3 x 500ul serum supernatant aliquots can be made from a 3ml clotted tube
* Each aliquot should be in an individual screw-top (with silicone o-ring) Cryovial
* Do not overfill the vials and ensure that the lids are completely screwed down after filling
* Ensure secondary containers for these aliquots clearly identifies them as **SERUM** and ISARIC RESEARCH, as once made they are indistinguishable from plasma aliquots.
* Freeze all aliquots at -80°C (or at -20°C if a -80°C freezer is not available)
* The original red-top blood tube, its cap and its remaining contents may be disposed

**Tempus Tube (note glass tube – FRAGILE)**

* No processing of the tube contents is required
* Ensure that the tube has been labelled at source with name, date of birth and sample date, and secondary container is clearly marked ISARIC RESEARCH.
* Freeze the tube immediately at -80°C (or at -20°C if a -80°C freezer is not available)