

Cytogenetic and Molecular Genetic Samples - Antenatal and Postnatal - Summary Clinical Guideline

Reference No.: AN/01:17/F5

Pre Natal Samples

Amniocentesis

- Samples sent with maternal blood sample, 4ml EDTA
- If gender testing is required the laboratory needs to be contacted
- If microarray is clinically indicated:
 - to be requested by the fetal medicine consultant
 - maternal and paternal blood samples in EDTA tubes are required at the time of the amniocentesis

CVS

- Maternal and paternal blood sample only if advised by clinical genetics
- FISH for Trisomy 13, 18, 21 and sex chromosomes is available if CVS is requested for a fetal abnormality
- If microarray is clinically indicated:
 - To be requested by the fetal medicine consultant
 - Maternal and paternal blood samples in EDTA tubes are required at the time of the CVS

Post Natal Samples

Microarray testing will be performed on all samples.

Requests for cytogenetic testing should be restricted to:-

- Any case with previous recurrent pregnancy loss (3 or more- including this pregnancy)
- Fetal dysmorphism (detected by scan or at birth)
- History of chromosomal abnormality
- History of antenatal karyotyping in the current pregnancy

Any information relating to the above should be clearly detailed on the referral form.

Any requests outside these criteria will be considered following consultation with a scientist in the laboratory.

Types of Sample for Cytogenetics:-

Placental, skin and POC samples should be sent in sterile saline in a sterile universal bottle.

Early gestation

A sample of the material from the products of conception (preferably not the entire P.O.C.) containing fetal tissue and/or placental structures.

Late gestation

- **Placental tissue sample** i.e. from the fetal surface at the base of the cord, approximately 1cm cubed PRIOR to putting placenta into formalin.

(Both placental and skin samples have a high success rate for microarray testing)

- **Fetal skin**

Full thickness and not macerated, 1-2mm cubed PRIOR to formalin.

- **Cord blood sample** If possible, 1-2mls in heparinised bottle

Transport of Antenatal Cytogenetic and Molecular Genetic Samples

Amniocentesis samples will be taken to the post room at RDH for special delivery post Monday-Thursday before 1630hrs to guarantee arrival by 1300hrs in the laboratory the following day. **On Fridays samples must be sent via taxi by 1400 hours.**

CVS samples will always be sent by taxi Monday-Friday and **must arrive in the laboratory by 14.30 hours.** This will enable processing of a direct result within 24hours.

FMMC will telephone the laboratory when samples are dispatched by taxi. It is not necessary to phone about samples sent via special delivery post.

Transport of Post Natal Cytogenetic Samples

Postnatal samples will be taken to the post room at RDH for special delivery post Monday-Thursday before 1630hrs to guarantee arrival by 1300hrs in the laboratory the following day. **On Fridays samples will be sent via taxi up to 14.00 hours, if this is not possible the sample needs to be stored in the fridge and sent via special delivery post after the weekend.**

Preparation of Samples for Transport to Laboratory

CVS samples and antenatal placental biopsies are sent in specialist transport medium which is supplied by the laboratory.

Amniotic fluid is sent in a sterile universal container.

POC, postnatal placental tissue and fetal skin are sent in sterile saline in a sterile universal container.

Before sending the samples ensure that the following are completed:

- Fully completed request form with all appropriate clinical information.
- Sample must be secured within the bag attached to the request form.
- If blood sample required this must accompany the sample.
- If paternal blood is accompanying the sample please cross reference it to his partner
- Sample and request form to be secured into the cardboard transport box.
- Ensure pre-printed address label for the cytogenetics department is attached to the top of the box.
- Place the cardboard box into the Royal Mail transport plastic bag (UN3373) as per EU regulations (NHS 2008 Appendix 3).
- Ensure the UN3373 bag has destination label for the cytogenetics department attached.

POSTAL ADDRESS for all samples:

Cytogenetics Department
Gate Three
Nottingham City Hospital Campus
Nottingham University Hospitals (NUH)
Hucknall Road
Nottingham
NG5 1PB

Telephone Numbers:-

Cytogenetics Department: 0115 9627617 (direct line)

Cytogenetics Dept. FAX: 0115 8402611

Molecular Genetics Department: 0115 9627743