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Title: Preparation of media with 10%FCS for Cell Culture

Version: v5

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SOP History		
Number	Date	Reason for Change
v1	01/01/2013	Original
v2	01/01/2015	Update
V3	01/01/2017	Update
V4	01/01/2019	Update
V5	01/01/2021	Update

1.0 Purpose –

This SOP describes the current procedure for making up routine cell culture media containing 10% Foetal Calf Serum (FCS) for cell culture use in Laboratory 248 at the St Andrews School of Medicine (SASoM). Whilst many cell lines require their own specific and specialised media, this SOP defines basic media which will cater for the majority of cell lines in use. Whilst there are no hard and fast rules, as a general guideline, breast cancer cell lines have historically tended to be made up in DMEM whilst ovarian cancer cell lines tend to be made up in RPMI.

2.0 Scope –

This SOP applies to the staff in the SASoM involved in cell culture work.

3.0 Responsibilities –

All staff involved in cell culture are responsible for ensuring that the methods are followed in accordance with this SOP.

All staff must have read and signed the relevant risk assessment documents before performing this procedure.



4.0 Procedure –

Take out 1 x 500ml bottle of Cell culture media (e.g. DMEM (Gibco; 31885-023); RPMI (Gibco; 21875-034) from the cold room and place in a water bath at 37°C to warm up.

Remove 1 x 60ml aliquot of Foetal Calf Serum (FCS) and 1 x 5ml aliquot of Penicillin / Streptomycin (Pen/Strep) from the freezer in the cell culture suite. Place both in water bath to defrost.

Spray the bottle of culture media, the FCS and the Pen/ Strep with 70% ETOH and transfer to the hood. Wipe dry.

Under aseptic conditions, add the 5ml aliquot of Pen/Strep to the bottle of media.

Using a suitable pipette, add 56ml of heat-inactivated FCS to the bottle of media. The bottle of DMEM / RPMI should now have a final concentration of 10% FCS (56ml FCS in a total volume of $500+56+5=561\text{ml} = 10\%$).

Label the bottle along with your name and the date. Store all made-up media in the fridge.

5.0 Personal protection –

A Howie coat must be worn at all times. Gloves as specified in the appropriate COSHH RA.

6.0 Spillages –

Always clean up any spills immediately after use, only you know what you have spilt and are aware of its hazard.

Spillages should be mopped up with paper towel, disinfected with 70% ethanol and finally washed with detergent.

7.0 Training –

All staff should complete an in house induction to the tissue culture area and be trained in sterile TC techniques before starting any TC work.

8.0 Related documents –

- 8.1 Risk assessments COSHH/004 and RA/BIOL/004
- 8.2 SOP SASoM/METHOD//005
Heat-inactivation of Foetal Calf Serum (FCS)
- 8.3 SOP SASoM/METHOD//007
Aliquoting TC supplements



9.0 Approval and sign off –

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