

**BLOOD SCIENCES
DEPARTMENT OF PATHOLOGY**

Title of Document: Neonatal and Paediatric Containers for Blood Collection

Q Pulse Reference N^o: BS/FT017






Version N^o: 3

Authoriser: Paul Virgo

Refer to the table below for the correct sample type for use in Neonates and Paediatric patients.

1) Inpatient NEONATAL Sampling

Blood samples must be taken in the correct order (Order of Draw).

Order of Draw	Tube Type and Cap Colour	Manufacturer	Additive	Tests	Special Instructions
1	Clotting Samples (Blue top) 	Teklab	Sodium Citrate	Clotting studies	Tube MUST be filled to the indicated level. Call Haematology Ext 48351 for additional bottles
2	Lavender top 	Becton Dickinson	EDTA	FBC	Mix x10 Times
3	Green top 	Becton Dickinson	Lithium heparin	For plasma determination of U&E, LFT, CRP, Bilirubin	Mix x10 Times
4	Grey top 	Becton Dickinson	Fluoride	Glucose, Lactate, Ethanol.	Mix x10 Times
5	Serum (Gold top) 	Becton Dickinson	Clot activator	For serum determinations of Chemistry and Immunology tests only	Mix x5 Times




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Order of Draw	Tube Type and Cap Colour	Manufacturer	Additive	Tests	Special Instructions
6	Paediatric Microvette 	Sarstedt	None	Antibiotic levels	n/a
7	Transfusion (Pink top) 	Sarstedt	EDTA	Transfusion samples (Group & Save, Crossmatch, Direct Coombs Test (DAT))	Sample must be labelled in line with Trust Guidelines 

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2) Paediatric Outpatients only.

Refer to the Standard Vacutainer BD collection tubes in Appendix I and available on [Severn Pathology Website](#) with the exception of:

Order of Draw	Tube Type and Cap Colour	Manufacturer	Additive	Tests	Special Instructions
2	Serum (Gold top) 	Becton Dickinson	Clot activator	Immunology tests only	

3) Arterial/Capillary Blood Sampling

Order of Draw	Tube Type and Cap Colour	Additive	Tests	Special Instructions	Appropriate Ward Use:
n/a	Blood gas capillary 	Heparin	Blood Gas and/or bilirubin analysis.	Analyse as soon as possible and within 15 minutes  Available on Request from POCT Dept Ext 48422	Neonatal (eg NICU) Paediatric OP Emergency Department

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4) GP and Other Paediatric Sampling

The following venepuncture protocols based on age group are recommended:

- In children <10 years of age venepuncture using a butterfly with 23g needle
- In children >10 years of age venepuncture using a straight 23g (black) needle
- Minimum sample volumes are 1ml per standard tube taken (with the exception of coagulation bottles) which are significantly below the maximum allowable volume in one blood draw defined by the World Health Organisation.

For bottle types refer to the Standard Vacutainer BD collection tubes Appendix I and [Severn Pathology Website](#)

5) References:

World Health Organisation - Maximum Amounts of Blood to be Drawn From Patients Younger than 14 Years RECOMMENDED MAXIMUM ALLOWABLE TOTAL BLOOD DRAW VOLUMES (CLINICAL + RESEARCH)

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Appendix I

BD Vacutainer[®]

BD Diagnostics - Preanalytical Systems










Tube Guide & Recommended Order of Draw*
* Clinical and Laboratory Standards Institute (Formerly NCCLS) Guidelines H3-A6, 6th Edition


North Bristol NHS Trust

General Wards

Blood samples must be taken in the following order:

#	Cap Colour	Additive	Tests	Special Instructions
1		Blood Culture	Aerobic followed by Anaerobic - if insufficient blood for both culture bottles, use Aerobic bottle only.	
2		Sodium Citrate	Clotting studies, INR, Heparin monitoring, Warfarin monitoring, D-Dimer.	Tube MUST be filled to the full draw volume. MIX 3-4 Times
3		SST [™] II	U&Es, LFT, Calcium, Lipids, Thyroid function test, CRP, Amylase, Magnesium, Vitamin B12, Folate, Ferritin, Serum electrophoresis, Antibiotic assays, Immunology, Serology, Lithium, etc.	MIX 5-6 Times
4		EDTA	Full blood count, plasma viscosity, immunosuppressants, Haemoglobin A1c, Parathyroid hormone, Sickle cell & thalassaemia, Malaria screens, ammonia.	MIX 8-10 Times
5		EDTA	Transfusion samples (Group & save, cross match, antenatal).	MIX 8-10 Times
6		Fluoride Oxalate	Glucose, Lactate, Ethanol.	MIX 8-10 Times
7		Trace Element	Zinc, Selenium, Aluminium, Copper, etc.	MIX 8-10 Times


For further copies of this guide and questions regarding specific tests, please contact the main Pathology Laboratory.



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IMPORTANT MIXING GUIDELINES

MIX 8-10 Times



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