

**BLOOD SCIENCES
DEPARTMENT OF BLOOD SCIENCES**

Title of Document: Neonatal and Paediatric Containers for Blood Collection





Q Pulse Reference N^o: BS/FT017

Version N^o: 2

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	Additive	Tests	Special Instructions
1	Clotting Samples (Blue top) 	Sodium Citrate	Clotting studies	Tube MUST be filled to the indicated level. Call Haematology Ext 48351 for additional bottles
2	Lavender top 	EDTA	FBC	Mix x10 Times
3	Green top 	Lithium heparin	For plasma determination of U&E, LFT, CRP, Bilirubin	Mix x10 Times
4	Grey top 	Fluoride	Glucose, Lactate, Ethanol.	Mix x10 Times

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Order of Draw	Tube Type and Cap Colour	Additive	Tests	Special Instructions
5	Serum (Gold top) 	Clot activator	For serum determinations of Chemistry and Immunology tests only	
6	Paediatric Microvette 	None	Antibiotic levels	n/a
7	Transfusion (Pink top) 	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	Additive	Tests	Special Instructions
2	Serum (Gold top) 	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		
					Neonatal (eg NICU)	Paediatric OP	Emergency Department
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 			

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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. 
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.	
4		EDTA	Full blood count, plasma viscosity, immunosuppressants, Haemoglobin A1c, Parathyroid hormone, Sickle cell & thalassaemia, Malaria screens, ammonia.	
5		EDTA	Transfusion samples (Group & save, cross match, antenatal).	
6		Fluoride Oxalate	Glucose, Lactate, Ethanol.	
7		Trace Element	Zinc, Selenium, Aluminium, Copper, etc.	

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



IMPORTANT MIXING GUIDELINES 

All BD Vacutainer[®] tubes require immediate mixing following collection. Insufficient mixing can result in inaccurate test results and the need to re-draw. Correct mixing technique is to invert each tube by the recommended number of times shown on the right hand side of the table.

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