

A Practical Approach to Procurement of Clinical Laboratory Products

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Context and Figures

Focus on (i) *clinical* laboratory supplies, (ii) for primary & first referral level, (iii) for UNICEF programs and correlated projects of partners.

Off-take per category, clinical laboratory (in USD)	2006	2007	2008	2009
1. Laboratory equipment	5,592,853	3,947,172	6,311,268	9,356,943
2. Lab disposable supplies	171,751	109,000	66,485	316,755
3. Lab renewable supplies	250,078	840,536	562,575	1,114,440
4. Lab chemicals and reagents	456,579	385,000	738,072	1,785,992
5. Diagnostic test kits	16,030,816	15,906,238	15,801,834	18,756,007
Total	22,502,077	21,187,946	23,480,234	31,330,137

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Approach: Identification and Specification

- Objective: facilitate prompt supply, therefore anticipate future supply requests.
- Step 1: Identify scope of supplies, strict focus.
 - (i) clinical laboratory,
 - (ii) primary & first referral level,
 - (iii) in line with UNICEF programmatic activities.
- Step 2: Decide “best supply solution” different subgroups (equipment, reagents, RDT, etc). Total items #450.

Approach: Identification and Specification

- Step 3: Conduct public tenders for clustered subgroups.
- Step 4: Award acceptable suppliers with Long Term Arrangement (LTA).
- Step 5: Monitor performance of suppliers & the supply solution itself.
- Step 6: Develop alternatives for procurement of supplies outside the strict scope (partners, outsource, etc).

Approach: Identification and Specification

- Step 1: Identify/ring fence scope of supplies. Strict focus.

Programmatic activity, at primary and first referral level, requiring clinical laboratory support:	Devices and reagents essential for clinical laboratory to support programmatic activity: approximately 450 items 1 2 3 4 5 6 7 200 201 202 448 449 450																				
Community-based care & support of HIV/AIDS affected children.	X	X					X	X		X					X						
Treatment of children infected HIV/AIDS for secondary & opportunistic infections.					X										X						X
Community-integrated management of neonatal and Childhood Illnesses.		X		X						X								X			
Scaling up actions to strengthen local basic service providers																					
Monitoring, disease and nutritional surveillance and surveys.	X		X	X			X						X	X	X	X					
Malaria treatment for children & pregnant women.				X				X	X										X	X	
Provision essential health & nutrition resources & commodities community level.		X		X	X	X	X				X							X	X	X	

Approach: Identification and Specification

- Step 2: “Best supply solutions” for the subgroups:
 - (i) Some subgroups clustered under one LTA available:
 - for COs via Direct Ordering.
 - for 3rd party via SD.
 - ±250 procurement specifications developed in-house.
 - (ii) HIV/AIDS devices & reagents, several LTAs, available:
 - for COs and 3rd party via SD.
 - ±50 procurement specifications developed in-house.
 - (iii) Subgroup RDTs and ELISA, several LTAs, available:
 - for COs and 3rd party via SD.
 - ± 150 WHO prequalified items.

Approach: Identification and Specification

<p>Paper, dry blood spot, box/100</p> <ul style="list-style-type: none"> • Dry blood spot (DBS) card with bar coding • Collects blood and preserves proteins for future nucleic acid analysis • 5 distinct spots • Stability min 18 months for DNA • Box of 100 	<p>Flask, volumetric, set/7</p> <ul style="list-style-type: none"> • Heat-resistant glass • Set with following sizes: <ul style="list-style-type: none"> 3 x 100 ml 2 x 250 ml 1 x 500 ml 1 x 1000 ml • Graduated
<p>Tube, capillary, heparin, box/1000</p> <ul style="list-style-type: none"> • Capillary glass tube • Heparin coated • Diameter, approx: 1.1 to 1.2 mm • Length, approx: 75 mm • Packaging tropical, per 100 • Packed per 100 tubes • Box 10 packs of 100 	<p>Bottle, 30 ml, set/6</p> <ul style="list-style-type: none"> • Colourless glass • Screw-top with dropper pipette • Leak-proof stopper • Supplied as a set of 6
<p>Tube, vacuum, EDTA, 6 ml, box/100</p> <ul style="list-style-type: none"> • Blood collection • Capped with vacuum seal • Plastic • Box of 100 	<p>Jar, Coplain, staining</p> <ul style="list-style-type: none"> • Fits slide of 26 x 76 mm • Capacity: 10 slides • Slides extend above the opening, allowing manipulation without forceps • Screw cap with metal foiled lining withstanding stain and organic solvents
<p>Lancet, safety, 1.8 mm, box/200</p> <ul style="list-style-type: none"> • Instant trigger launches spring-based needle • Needle, approx: 1.8 mm • Single-use disposable • Mechanism prevents reuse • Clean packed in box of 200 	<p>Slide, microscope, box/100</p> <ul style="list-style-type: none"> • Thickness: 1.0 - 1.2 mm • Size: 76 x 26 mm • Colourless glass • Clinical grade, non-corrosive, clean washed and polished • Free from nicks and scratches. • Dimensions and optical properties conform ISO 8037 (part 1 and 2) • Packed fibre-free • Box of 100

Approach: Identification and Specification

Distillation unit, 2 L/h, with tank

- Automatic water purification system.
- Operates from raw potable feed water 2 to 6 bar, 4 to 35 C
- Output conductivity, approx: 2 μ S, at 20 C
- Tank capacity, approx: 4 L
- Unit indicates power on/off, standby and/or in process, tank level.
- Thermostatic control as well as overheat protection
- Free-standing or wall mounted, supplied with necessary fixing materials for wall mount.
- Power requirements: 220 V / 50 Hz
- Power consumption: 1500 W
- To be supplied with:
Spare set of deionization, adsorption and filtration cartridges.
- Supplied with:
Instructions for use, for preventive maintenance and troublesh

Analyser, haematology, 18 parameter

- Determination of 18 parameter, with 3-part differential, for routine haematology
- Open system, automatic
- Sample size, approx: 30 μ l
- Throughput 50 samples per hour
- Determination of:
Red blood cell (RBC), White blood cell (WBC), Haemoglobin (HGB), Haematocrit (HCT), Mean cell volume (MCV), Mean cell haemoglobin (MCH), Red cell distribution (RDW-SD and RDW-CV), Platelets (PLT), Platelet distribution (PDW-SD and PDW-CV), Mean platelet volume (MPV), differential leucocytes (LYM, LYM%, MID, MID%, GRA, GRA%).
- Sample ID, date and time are reported with test results
- Supplied complete with dedicated data analysis and data management software
- Results are reported on external inkjet printer
- Casing, corrosion proof material such as plastic or epoxy coated steel
- With built-in RS232 or equivalent, allowing data transfer.
- Power requirements: 220 V / 50 Hz
- Power consumption: 400 W
- Supplied with:
UPS of sufficient size to ensure uninterrupted sample testing in case of power variations or power interruption.
- Supplied with:
Instructions for use, for preventive maintenance and troubleshooting in E/F/S

Approach: Identification and Specification

- We invariably insist on, and verify adherence to, applicable international quality standards:
 - (i) Manufacturer:
Accredited quality management system according ISO 9001:2000 or ISO 13485:2003.
 - (ii) Its products:
Safety and quality certification according CE MDD 92/43 or CE IVDD 98/79.

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Challenges and Opportunities

- Assisting with procurement specifications. Identification & planning/quantification remains problem.
=> Provision of sets (f.e. UNITAID) works well.

List E3: DBS collection	UNICEF material Number	Dry Blot Spot Collection	Quantity for 100 DBS collection		CD4 [abs, %] CyFlow (Partec)	Quantity for 200 tests
	U484650	Paper, dry blot spot Box of 100	1			
	U484650	Powder free gloves, Box of 100	2.0			
	U484650	Compress, gauze, 5x5cm, disinfectant Box of 100	2.0			
	U484650	Lancet, safety, 1.8mm, sterile, single-use Box of 200	1.5			
	U484650	Bandage, adhesive, diameter, 3cm Box of 100	1.2			
	U484650	Bag, plastic, 14x25cm Box of 500	0.1			
	U484650	Label, self adhesive, 5x10cm Box of 100	1.0			
	U484650	Silica gel, pouch Box of 1000	0.2			
	U484650	Humidity monitor on card, pack of 10	5.0			
	U484650	Label, biohazard, self-adhesive, 5x5cm, box/100	0.5			
	U484650	Envelope, glassine, 10x15cm Box of 50	2.0			
	U484650	Packing envelope, 35x25cm Box of 100	0.5			
				S0001253	CyFlow, Decontamination solution, 250ml	1.0
				S0001254	CyFlow, Cleaning solution, 250ml	1.0
				S0001255	CyFlow, Hypochloride solution, 250ml	10.0
				S0001256	CyFlow, Pipette tip, 20-200 ul /BOX-1000	1.0
				S0001257	CyFlow, Pipette tip, 50-1000 ul /BOX-1000	1.0
				U484650	Powder free gloves, Box of 100	6.0
				U484650	Biohazard bags 20 L. roll/100	0.5

Challenges and Opportunities

- Major challenge to procure VL technology (f.e. PMTCT).
 - => Involve local capacity at tertiary level.
 - => Involve specialized partners.
 - => Consultants for assessment and planning.
 - => Alternative arrangement: fee-for-service.

Challenges and Opportunities

- Harmonization of platforms.
 - => Per request we inquiry for harmonization with MoH.
 - => Remains largely inadequate.
- Maintenance and replenish.
 - => Supply with start-up set reagents & renewable.
 - => Specification with “local technical representation”.

THANK YOU ...



FOR YOUR ATTENTION !

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