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# SADCMET WATER PT EVALUATION WORKSHOP

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MICROBIOLOGY WATER PT  
HOTEL AFRICANA  
11<sup>TH</sup> – 12<sup>TH</sup> DECEMBER 2008

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Uganda National Bureau of Standards

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# Background

## **Equipment & Media**

- ❑ Refrigerated centrifuge (PTB)
  - ❑ Transport media chemicals
  - ❑ Lactose TTC
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# Background

## **Training of Lab Staff**

- ❑ Quality control of strains, transport medium & trial samples
  - ❑ Stability & purity of trial samples and strains during handling
  - ❑ Bacterial counts of stock solution (Sol E)
  - ❑ Calculations for spiking
  - ❑ Logistics (packaging, labeling, temperature control etc)
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# Background

- Trial Run1 (Nov 2007):Preparation of stock culture (E. coli)
  - Trial run 2 (April 2008):Preparation of stock culture (E. coli & Enterobacter)
  - Trial run 3 (July 2008): Preparation of sample (E. coli)
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# Preparation of 1<sup>st</sup> Round

- Notification – 3<sup>rd</sup> March 2008
  - Registration – Total of 25 Labs
  - Payments
  - Participation – Total of 19 Labs
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## Preparation of 1<sup>st</sup> Round (September)

- Preparation of Transport medium (3<sup>rd</sup>)
  - Preparation of Solution E (4<sup>th</sup>) – *Escherichia coli*
  - Spiking of samples (8<sup>th</sup>)
  - Bottling of samples (9<sup>th</sup>)
  - Packaging (10<sup>th</sup>)
  - Distribution (10<sup>th</sup>)
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# Preparation of 1<sup>st</sup> Round

- **Packaging**
  - Cardboard box lined with foam. Plastic sterile bottles for samples. Ice boxes to be inserted



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# Preparation of 1<sup>st</sup> Round

## ■ Documentation

- ❑ 1<sup>st</sup> Notification for Microbiology Water PT
  - ❑ Database of registered participants
  - ❑ Letter of instructions
  - ❑ Results form
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# Preparation of 1<sup>st</sup> Round

- **Transportation**

- Courier service to individual participants

- **Communication**

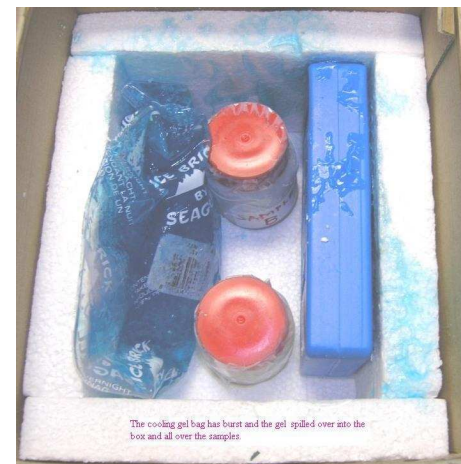
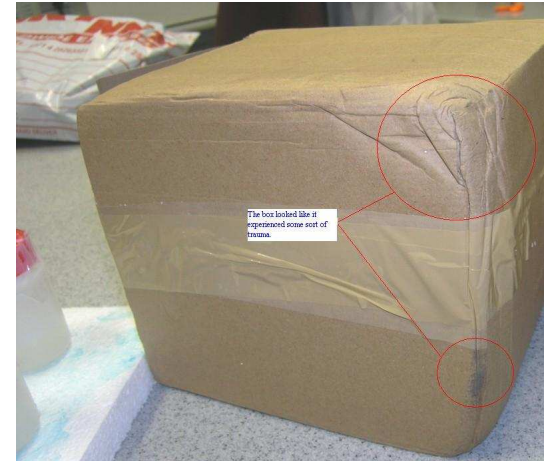
- E-mail
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Lab ID	Method (Coliforms)	Temp BA	Temp I	Media	Cfu/100ml	Cfu/ml
1	Pour plate	22	36	BCS agar		220,000
2	AWWA:9222D	19.5	44.5	M-FC agar	106	
3	ISO9308-2	16	44	MLSB	0	
4	MF	25.3	35	mEndo agar	22,500	
7	BMMM-S11-08	18	30	MacConkey agar	276	
9	ISO9308-1	4	37	Lactose TTC	>300	
10	ISO9308-1	10.8	37	mEndo agar	3000	
11	MPN	26	35	LTB	1600(MPN)	
12	Colilert-18		37		1,425,000	
13	ISO9308-1	23	37	Lactose TTC		30
14	MF8074	24.5	44	M-FC broth	17	
16	MF9215D	25	44.5	M-FC agar/BGB	1150	
17	RS 15-3	24.8	37	VRB	>300	
18	ISO9308-1	25	37	LSB/BGB	46,000	
19	KS 05-220	24	30	VRB agar	1	
20	ISO9308-1	10.7	37	VRBL	210	
21	Pour plate	23	37	VRB	18,250	
22	MF	26	37	VRB	>150	
23	MPN	8	36	LSB/BGB		4.5

Lab ID	Method (TPC)	Temp BA	Temp I	Media	Cfu/ml
1	ISO 6222	22	36	YEA	210,000
2	ISO 6222	22	35	YEA	21,700
3	ISO 6222	22	37	Nutrient agar	4
4	Pour plate	25.9	35	TGEA	2,950,000
7	BMMM-S11-07	22	30	PCA	706
9	ISO 6222	4	37	YEA	323,000
10	ISO 6222	14	37	PCA	100
11	Pour plate	26	35	PCA	31,000
12	NA	NA	NA	NA	NA
13	FAO14/4(2)	21	35	PCA	550,000
14	NA	NA	NA	NA	NA
16	Pour plate	25	22	PCA	78,000,000
17	RS 15-2	24.8	37	PCA	>300
18	ISO 6222	25	37	YEA	520,000
19	KS05-220	24	30	PCA	135
20	ISO8199	12	37	PCA	842
21	Pour plate	23	37	PCA	350,000
22	Pour plate	26	37	PCA	350,000
23	Plate count	8	36	Nutrient agar	15,000

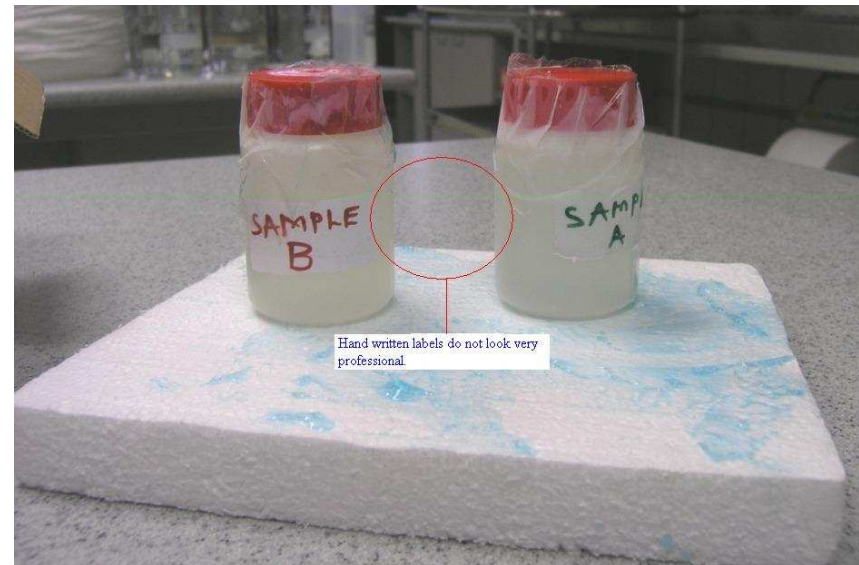
# Feedback

- We are of the opinion that the results that we obtained should not be taken as valid, because the samples did not comply with the sample transport procedures and guidelines that are being used at our lab.



# Feedback

- There was no information on the instruction sheet that would have given us an indication as to what type of water do the PTS samples simulate. For example, we are currently taking part in the PTS distributed by HPA, and the instruction sheet gives a clear indication whether the sample simulates potable water or untreated water, so that the analysts will get an idea whether dilutions are necessary or not.



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# Challenges

- Communication to local coordinators
  - Stability of the sample
  - Temperature regulation (very high counts)
  - Payments
  - Feedback from participants (limited information on form)
  - Courier service
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# Way Forward

- Temperature control – packaging, transportation
  - Communication – coordinators, consultant, websites (SADCMET/EAC)
  - Record form – more information
  - Cost analysis
  - Maintain PT schedule
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