

Evaluation for approved samples of Chemical Regents & Laboratory Items (RQ-2030)

Suppliers Naem			HR Scientific Traders		Kashmir Pharmacy (Opt-I)		Growthquest Enterprises		Kashmir Pharmacy (Opt-II)		NEOTECH Suppliers Pvt Ltd		Technoliance Health		Moon Enterprises		Musaji Adam & Sons	
S#	Description	Total Qty	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
1	Microscope Glass Slide Precleaned, 75mm x 25mm x 1.0mm - 1.02mm thick, frosted end (72/Pack)	4378	469.00	2,053,282	515.00	2,254,670	550.00	2,407,900	756.00	3,309,768	708	3,099,624	784.70	3,435,417	383.50	1,678,963	-	-
2	Blood Lancet, Fine Gauge, plastic stem & cover, tri-bevel tip, disposable, sterile, (200/Pack)	1550	299.00	463,450	320.00	496,000	325.00	503,750	320.00	496,000	425	658,440	466.10	722,455	322.14	499,317	-	-
3	ALCOHOL SWABS, Swabs (saturated with 70% IPA), (200/box)	1150	299.00	343,850	310.00	356,500	325.00	373,750	310.00	356,500	425	488,520	584.10	671,715	326.86	375,889	-	-
4	GIEMSA STAIN, Merck Germany Original Packing, 1 Liter bottle.	111	7,315.00	811,965	17,400.00	1,931,400	19,300.00	2,142,300	17,400.00	1,931,400	18,408	2,043,288	29,087.00	3,228,657	-	-	9,100.00	1,010,100
5	METHANOL BDH 2.5 Lit /Bottle, Original Packing. BDH, sigma or equal.	10	1,400.00	14,000	1,550.00	15,500	1,770.00	17,700	1,550.00	15,500	4,956	49,560	4,106.40	41,064	-	-	6,000.00	60,000
6	DISTILLED WATER 6 Litre Bottle.	288	289.00	83,232	305.00	87,840	320.00	92,160	305.00	87,840	533	153,608	1,150.50	331,344	-	-	-	-
7	OIL IMMERSION 500 ml Bottle, Original Packing, Merck, BDH, Sigma or equal.	12	1,375.00	16,500	1,780.00	21,360	3,186.00	38,232	1,780.00	21,360	9,204	110,448	2,619.60	31,435	-	-	-	-
8	SPIRIT, Methylated Spirit 1 Liter, Local.	35	280.00	9,800	350.00	12,250	325.00	11,375	350.00	12,250	566	19,824	885.00	30,975	-	-	-	-
9	Cotton Wool, (400 gram), Hydrophilic.	30	129.00	3,870	300.00	9,000	440.00	13,200	300.00	9,000	746	22,391	660.80	19,824	-	-	-	-
10	TISSUE ROLL, Color White, Good Quality, Rose Petal or equal.	280	109.00	30,520	130.00	36,400	325.00	91,000	130.00	36,400	586	164,209	200.60	56,168	-	-	-	-
11	Staining Dish For Slides Staining (Slide staining Rack, Box plastic having capacity of 100 slides)	40	299.00	11,960	1,293.00	51,720	1,062.00	42,480	1,293.00	51,720	3,823	152,928	767.00	30,680	-	-	-	-
12	SOAP, +/- 100g, Dettol, safeguard or equal.	210	179.00	37,590	150.00	31,500	148.00	31,080	150.00	31,500	170	35,683	295.00	61,950	-	-	-	-
GRAND TOTAL			3,880,019.00		5,304,140.00		5,764,927.00		6,359,238.00		6,998,522.18		8,661,683.80		2,554,169.00		1,070,100.00	
Selected Items Total			1,325,697.00		2,750,670.00		31,080.00											
Selected Items Grand Total			4,107,447.00															
DELIVERY TIME			2 Weeks		14 Working Days		Within 3 Weeks		14 Working Days		10-20 Days		??		??		2 Weeks	

Recommendations:

- 1 Samples were inspected/tested and reports for each item/supplier are attached.
- 2 Based of Inspection/Testing and offered price, purchase Item# 1 & 2 from **M/s Kashmir Pharmacy (Opt-I)**, Item# 3 to Item# 11 from **M/s HR Scientific Traders**, Item# 12 from **M/s Growthquest Enterprises**.
- 3 Buffer Tablets cancelled due to wrong specification mentioned in the tender.

Inspection Report of samples of chemicals and reagents under GFATM DOMC (RQ-2030)

S.NO	ITEM	Description of offered Items	Typical Packaging	UOM (Packing)	HR Scientific		Kashmir Pharmacy (Opt-I)		Kashmir Pharmacy (Opt-II)		Growthquest Enterprises		Moon Enterprises		Technoalliacne		Musaji Adam & Sons		
					Description of offered Items	Remakrs	Description of offered Items	Remakrs	Description of offered Items	Remakrs	Description of offered Items	Remakrs	Description of offered Items	Remakrs	Description of offered Items	Remakrs	Description of offered Items	Remakrs	Description of offered Items
1	MICROSCOPE GLASS SLIDE	Pre-cleaned, 75mm x 25mm, 1.0mm - 1.02mm thick, frosted end.	72/Pack	Pack	Cat No.7105	Slides are not clear and of low quality, Not Approved	CMC- Cat#7105, as per required specs	Approved	Labtech Cat#7107, 50pcs/Pack, as per required specs	Approved	Biopad Cat#7105, 50pcs/Pack, as per required specs	Approved	Imumed, Cat#7105	Not clear, having rough edges, Not approved	No Sample Called	No Sample Called	Wellcosol WS14001 (Exp 31-7-2026)	It is Not accepted due to does not meet the standard criteria of WHO.	
2	BLOOD LANCET	Fine gauge, plastic stem and cover, tri-bevel tip, disposable, sterile,	200/Box	Box	Life Care,	Quality is low, Not Approved	Safety (Exp-17-8-2028), as per requiured specs	Approved	Safety (Exp-17-8-2028), as per requiured specs	Approved	Safety (Exp-11-9-2028), as per requiured specs	Approved	Icare Imumed (Exp 31-08-2030)	Low quality, Not Approved					
3	ALCOHOL SWABS	Swabs (saturated with 70% IPA),	200/ pack	Pack	Yingmed Brand, as per required	Approved	Life Line, as per required spces	Approved	Life Line, as per required spces	Approved	Life Line, as per required spces	Approved							
4	GIEMSA, STAIN,	Merck Original Packing , Germany, 1 Ltr packing	1 Liter Bottle	Bottle	Sigma Aldrich HX31928204 (Exp-30-6-2026)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich HX44150404 (Exp-31-7-2027)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich HX44150404 (Exp-31-7-2027)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich HX21075104 (Exp-31-1-2026)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved			No Sample Called	No Sample Called	No Sample Called	No Sample Called	
5	METHANOL	2.5 Lit /Bottle, Original Packing, Merck, BDH, Sigma or equal.	2.5 Liter Bottle	Bottle	Sigma Aldrich STBL2845 (Exp-31-10-2028)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich STBL2845 (Exp-31-10-2028)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich STBL2845 (Exp-31-10-2028)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich STBK7675 (Exp-31-5-2027)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved							
6	DISTILLED WATER	6 Liter Bottle	6 Liter Bottle	Bottle	Batries Care, 1456-1520 , as per required specs	Approved	Loan & Sons, as per required psecs	Approved	Loan & Sons, as per required psecs	Approved	Lab Care, as per required psecs	Approved							
7	OIL, IMMERSION	500 ml/Bottle, Original Packing , Merck, BDH, Sigma or equal.	500 ml. Bottle	Bottle	Sigma Aldrich HX46120299 (Expe-31-11-2027)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich HX46120299 (Expe-31-11-2027)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich HX46120299 (Expe-31-11-2027)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Sigma Aldrich BCCK3154 (Exp-31-3-2026)	As per VBD Lab report It is accepted due to meet the Standard criteria Of WHO. Approved	Not other sample called						
8	SPRIT	Methylated Sprit, Local.	1 Liter Bottle	Bottle	Local as per required spces	Approved	3 Star Brothers, as per required specs	Approved	3 Star Brothers, as per required specs	Approved	Mayo, as per required specs	Approved							
9	COTTON WOOL	400G Hydrophilic	Individual packaging	Each	Syrgi Cot, 400G, as per required spcecs	Approved	Evershine, as per required spces	Approved	Evershine, as per required spces	Approved	Crscent, as per required spces	Approved							
10	TISSUE ROLL	Color white, Good quality Rose Patel or equal.	Individual packaging	Each	Rose Petal Maxob, as per required specs	Approved	Rose Petal Maxob, as per required specs	Approved	Rose Petal Maxob, as per required specs	Approved	Rose Petal Maxob, as per required specs	Approved							
11	STINING DISH FOR SLIDES	Slide staining Rack/Box plastic having capacity of 100 slides	Individual packaging	Each	Plastic, as per required specs	Approved	Plastic, as per required specs	Approved	Plastic, as per required specs	Approved	Glass tub provided, not as per requireid specs	Not Approved							
12	SOAP	+/-100g Dettol, Safeguard or equal.	Individual packaging	Each	Dettol 100g, as per approved specs	Approved	Dettol 100g, as per approved specs	Approved	Dettol 100g, as per approved specs	Approved	Safeguard 125g & Hypro 128g, as per requirid specs	Approved							
13	BUFFER TABLETS	Ph 7.0 dosr for 1 liter, 100 tablets/pack, Iovibond or equal	100/pack	Pack	Cancelled, as wrong specs were given in the tender documents														



Quality Assurance Report of Giemsa Stain, Methanol and Immersion Oil for Malaria Diagnosis

**Report Prepared by: Kanwal Naz
Quality Assurance Officer
VBDs DGHS, Sindh**

1-QA Committee Members:

The evaluation was conducted to ensure the quality of lab reagents (Giemsa stain , Methanol and immersion oil) by following QA team members of Sindh Reference Lab.

a- Miss Kanwal Naz (QA officer GFATM –VBD Sindh)

b- Mr. Iqbal (Senior Microscopist –VBD Sindh)

c- Miss Urooj Afreen (Microscopist – GFATM Sindh)

2-Back Ground:

Malaria diagnosis through microscopy remains the gold standard and the quality of the lab reagents affects the accuracy and reliability of diagnosis. As a part Sindh Reference Laboratory (VBD-Sindh) has received Lab reagents on **13th May2025** from private SR-National Rural support Program (NRSP) for Quality Assurance.

The detail list of received items from private SR- NRSP are given below.

#	Item	Manufacturer	Sample Marking	Batch/Lot No.	Expiry Date	Quantity
1	Giemsa Stain	Sigma-Aldrich	Kashmir Pharmacy	HX44150404	31-03-2027	01 bottle (1000 ml)
2	Methanol	Sigma-Aldrich	Kashmir Pharmacy	STBL2845	31-10-2028	01 bottle (2500 ml)
3	Immersion Oil	Supelco	Kashmir Pharmacy	HX46120299	30-11-2027	01 bottle (500 ml)
4	Giemsa Stain	Sigma-Aldrich	HR	HX31928204	30-06-2026	01 bottle (1000 ml)
5	Methanol	Sigma-Aldrich	HR	STBL2845	31-10-2028	01 bottle (2500 ml)
6	Immersion Oil	Sigma-Aldrich	HR	HX46120299	31-11-2027	01 bottle (500 ml)
7	Giemsa Stain	Sigma-Aldrich	Growth Quiets	HX21075104	31-01-2026	01 bottle (1000 ml)
8	Methanol	Sigma-Aldrich	Growth Quiets	STBK7675	31-05-2027	01 bottle (2500 ml)
9	Immersion Oil	Sigma-Aldrich	Growth Quiets	BCCK3154	31-03-2026	01 bottle (500 ml)
10	Giemsa Stain	Well coSol	Moosaji Adam	WS14001	31-07-2026	01 bottle (1000 ml)
11	Immersion Oil	Sigma-Aldrich	Techno Lines	HX46120299	31-11-2027	01 bottle (500 ml)

3- Visual Inspection:

All bottles of received lab reagents (Giemsa, Methanol and Oil Immersion) were sealed pack, not found any damaged and expire items.

4- Proceeding of Quality Assurance of Lab Reagents.

- Quality Assurance team collected positive blood samples from district Thatta and negative blood samples from district Hyderabad for quality assurance of Lab items.
- Prepared total 240 slides from positive and negative blood samples.
- QA team prepare total 160 slides (80 positive and 80 negative slides) to evaluate the quality of all batches of Giemsa stain .QA team stained 20 positive and 20 negative slides from each batch /lot of Giemsa stain) through **Regular method** according to recommended **timings 30-45 minutes**.
- QA team prepare total 80 slides (40 positive and 40 negative slides) to evaluate the quality of all batches of Giemsa stain. QA Team stained 10 positive and 10 negative slides from each batch/ lot of Giemsa stain through **rapid method** according to recommended **timings 7-10 minutes**.
- Thin smear of all prepared slides was fixed with 03 different batches of Methanol.
- All slides were examine through 04 different batches of Oil immersion.

i. Results of Giemsa Stain:

S. #	Manufacture	Batch #	Expiry	Findings /Results	Accepted / Not Accepted
1	Sigma-Aldrich	HX44150404	31-03-2027	• It was physically observed that colour of stain was blue-violet, visually clear with no any particulate. • Upon examination, parasite visualization was clear. The cytoplasm stained blue and nucleus appeared red. • Red blood cells (RBCs) observed pale pink or greyish, maintaining their normal shape and size without hemolysis. • White blood cells (WBCs) observed blue to Purple. • It was observed that the background of the Stained blood films was clean, free from artefacts, and the slides were not overly stained.	It is accepted due to meet the Standard criteria Of WHO.
2	Sigma-Aldrich	HX31928204	30-06-2026	• It was physically observed that colour of stain was blue-violet, visually clear with no any particulate.	It is accepted due to meet the Standard criteria Of WHO.

				• Upon examination, parasite visualization was clear. The cytoplasm stained blue and nucleus appeared red. • Red blood cells (RBCs) observed pale pink or greyish, maintaining their normal shape and size without hemolysis. • White blood cells (WBCs) observed blue to purple. • It was observed that the background of the stained blood films was clean and free from artefacts, and the slides were not overly stained	
3	Sigma-Aldrich	HX21075104	31-01-2026	• It was physically observed that colour of stain was blue-violet, visually clear with no any particulate. • Upon examination, parasite visualization was clear. The cytoplasm stained blue and nucleus appeared red. • Red blood cells (RBCs) observed pale pink or greyish, maintaining their normal shape and size without hemolysis. • White blood cells (WBCs) observed blue to purple. • It was observed that the background of the stained blood films was clean and free from artefacts, and the slides were not overly stained.	It is accepted due to meet the Standard criteria Of WHO.
4	Wellcosol	WS14001	31-07-2026	• It was physically observed that colour of stain was blue -violet, visually clear with no any particulate. • Upon examination faded or patchy staining was observed and few area of slides was lighter and Not properly stained. • Nucleus and cytoplasm of parasite observed weak and barely visible. • It was observed that the background of the stained blood films was not clean, and artefacts were present across the smear.	It is Not accepted due to does not meet the standard criteria of WHO.

Recommendations for Giemsa stain in Malaria Microscopy:

- Always use freshly prepared working solution, its essential for accurate visualization of malaria parasites.
- Giemsa stain should be placed at dark and cool place.
- To ensure optimal staining quality and consistent parasite visualization, buffer water with pH of 7.2 must be used for Giemsa stain preparation, as recommended by WHO.
- Recommended time and stain concentration is essential for clear visualization of malaria parasites.

ii. Results of Methanol:

S.#	Manufacturer	Batch #	Expiry	Results/Findings	Accepted/ Not Accepted
1	Sigma-Aldrich	STBL2845	31-10-2028	- The physical appearance of this batch was clear and colorless, no unusual Smell and particles were found. - The purity of this batch is $\geq 99.7\%$ (GC), the Quantity of water is (0.3%) (Kari Fischer) indicating that its composed of entirely methyl alcohol which serves an Important fixative function. - During microscopy, all stages of parasites were clearly visible. Lysis of red blood cells was not seen, as well as parasitic morphology was well preserved.	Accepted
2	Sigma-Aldrich	STBL2845	31-10-2028	- The physical appearance of this batch was clear and colorless, no unusual Smell and particles were found. - The purity of this batch is $\geq 99.7\%$ (GC), the Quantity of water is (0.3%) (Kari Fischer) indicating that its composed of entirely methyl alcohol which serves an Important fixative function. - During microscopy, all stages of parasites were clearly visible. Lysis of red blood cells was not seen, as well as parasitic morphology was well preserved.	Accepted
3	Sigma-Aldrich	STBK7675	31-05-2027	- The physical appearance of this batch was clear and colorless, no unusual Smell and particles were found. - The purity of this batch is $\geq 99.7\%$ (GC), the Quantity of water is (0.3%) (Kari Fischer) indicating that its composed of entirely methyl alcohol which serves an Important fixative function. - During microscopy, all stages of parasites were clearly visible. Lysis of red blood cells was not seen, as well as parasitic morphology was well preserved.	Accepted

Recommendations for Methanol in Malaria Microscopy:

- Thin blood smear should be completely air dry before methanol fixation.
- Allow the methanol to evaporate completely before proceeding with staining.
- Handle methanol in a well-ventilated area due to its toxicity and flammability.

iii. Results of Immersion Oil:

S.#	Manufacturer	Batch#	Expiry	Results	Accepted / Not Accepted
1	Supelco	HX46120299	30-11-2027	•Physically it was transparent and there were no visible impurities present. •The Observed refractive index of oil was 1.515–1.517 which falls within the optimal range recommended for light microscopy this ensures proper matching with the objective lens, minimize light refraction and maximize image clarity. • The Observed density of oil was 1.02 g/cm³, which helps it remain stable and stay in place also ensuring consistent image quality throughout slide evaluation. •No crystals or air bubbles were observed in the immersion oil during microscopy examination. • A clear and sharp image was observed During microscopy under 100X magnification without any blurring.	Accepted
2	Sigma-Aldrich	HX 46120299	31-11-2027	•Physically it was transparent and there were no visible impurities present. •The Observed refractive index of oil was 1.515–1.517 which falls within the optimal range recommended for light microscopy this ensures proper matching with the objective lens, minimize light refraction and maximize image clarity. • The Observed density of oil was 1.02 g/cm³, which helps it remain stable and stay in place also ensuring consistent image quality throughout slide evaluation •No crystals or air bubbles were observed in the immersion oil during microscopy examination. • A clear and sharp image was observed during microscopy under 100X magnification without any blurring.	Accepted

3	Sigma-Aldrich	BCCK3154	31-3-2026	• It was physically transparent observed and there were no visible impurities present. • The Observed refractive index of oil was 1.515–1.517 which falls within the optimal range recommended for light microscopy this ensures proper matching with the objective lens, minimize light refraction and maximize image clarity. • The Observed density of oil was 1.02 g/cm³, which helps it remain stable and stay in place also ensuring consistent image quality throughout slide evaluation • No crystals or air bubbles were observed in the immersion oil during microscopy examination. • A clear and sharp image was observed during microscopy under 100X magnification without any blurring.	Accepted
4	Sigma-Aldrich	HX46120299	31-11-2027	• It was physically transparent observed and there were no visible impurities present. • The Observed refractive index of oil was 1.515–1.517 which falls within the optimal range recommended for light microscopy this ensures proper matching with the objective lens, minimize light refraction and maximize image clarity. • The Observed density of oil was 1.02 g/cm³, which helps it remain stable and stay in place also ensuring consistent image quality throughout slide evaluation • No crystals or air bubbles were observed in the immersion oil during microscopy examination. • A clear and sharp image was observed during microscopy under 100X magnification without any blurring.	Accepted

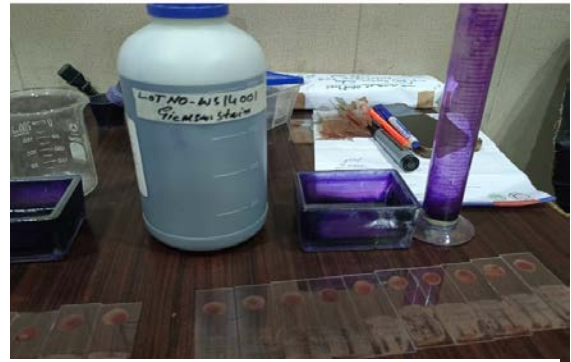
Recommendation for Oil Immersion during Malaria Microscopy.

- Store immersion oil tightly sealed, away from heat and light.
- Apply **just one drop** to the slide on the stained smear to prevent overflow on to the microscope stage or lens.
- To avoid contamination, storage bottle /container of oil immersion should be clean.

PICTURES



Lab Reagents for Quality Assurance



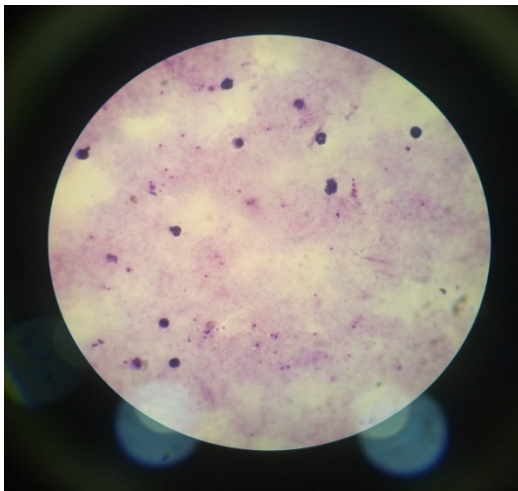
Prepared slides for Quality Assurance of Giemsa Stains



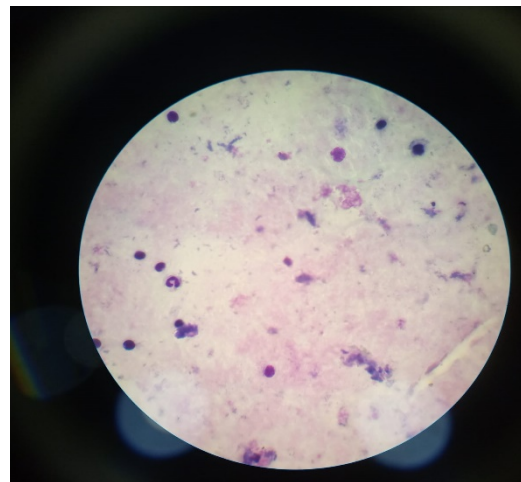
Performed staining for Quality Assurance of Giemsa Stains



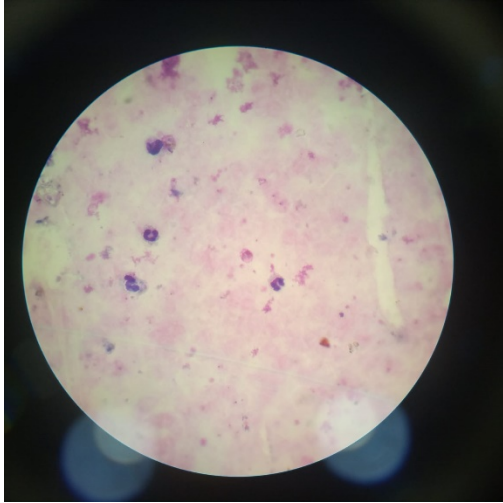
Examination the quality of staining



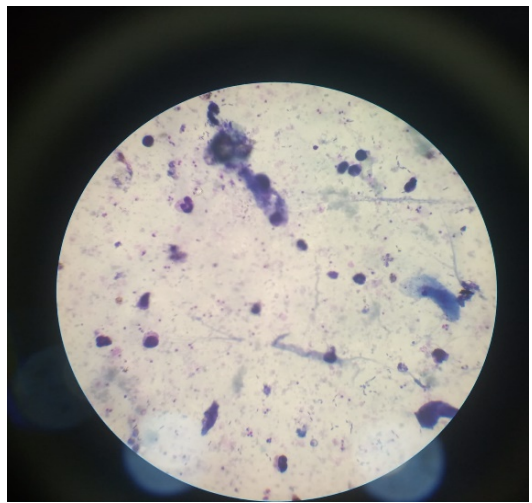
Stain quality of Sigma Aldrich Batch #HX4415404



Stain quality of Sigma Aldrich Batch #HX31928204



Staining quality of Sigma Aldrich Batch # HX21075104



Staining quality of Well co Sol Batch #WS14001