

Practice Number: 5200296

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| Instructions for  Participants | **04 Nov 2021**  **03-2021** | |
| These are the clinical scenarios and response form for the NHLS Parasitology Stool PT Scheme. Detailed instructions can be found in the new Instruction Booklet for all NHLS Proficiency Testing Schemes. | | **NHLS Proficiency Testing Scheme – Parasitology Stool** |



# **NHLS Stool Parasites PT Scheme 0321**

**SURVEY RESPONSE FORM 0218**

**PTS LAB NO: \_\_\_\_\_\_\_\_ LABORATORY NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **CHALLENGE:** | **ANSWER CODE/S:** | **CLINICAL HISTORY:** | **INSTRUCTIONS:** |
| **PS11/21**  Stool/urine concentrate |  | * Patient complaining of severe abdominal pain andfatigue. | Vortex/mix the specimen well. Make a few wet preparations and examine the slide for parasites using 10x and 40x objectives. |
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| **PS12/21**  Stool/urine concentrate |  | Patient complaining of mild abdominal cramps, including loose stools | Vortex/mix the specimen well. Make a few wet preparations and examine the slide for parasites using 10x and 40x objectives. |
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| **PS13/21**  Stool/urine concentrate |  | * Patient complaining of perianal itching and insomnia. | Vortex/mix the specimen well. Make a few wet preparations and examine the slide for parasites using 10x and 40x objectives. |
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| **PS14/21**  Stool/urine concentrate |  | Patient complaining of abdominal pain and mild abdominal cramps | Vortex/mix the specimen well. Make a few wet preparations and examine the slide for parasites using 10x and 40x objectives. |
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| **PS15/21**  Stool smear |  | Patient complaining of bloating and loss of appetite | You are provided with a fixed stool smear; stain with an appropriate stain and examine the slide for parasites using the appropriate objective. Please **do not** return your slide. |
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| Stain used: |

**IMPORTANT INFORMATION**

* Please read the **instruction booklet** on internet for detailed instructions.
* Codes for completion of the response form can be found on internet
* The closing date for Survey 03 2021 is the **26** **Nov 2021.**
* Submit results and queries to **parapts@nhls.ac.za** or 086 225 2460.

**TEACHING SERIES:** **Schistosomiasis**

Schistosomiasis, also known as bilharzia, is a disease caused by parasitic worms. Infection with *Schistosoma mansoni, S. haematobium*, and *S. japonicum* causes illness in humans and more than 200 million people worldwide are infected with schistosomiasis.1 In South Africa, schistosomiasis is caused mainly by *S. haematobium* and *S. mansoni* but not *S. japonicum* as it only occurs in Southeast Asia, although it might be encountered in South Africa from cases with travel history to endemic countries.

*S. haematobium* causes urinary bilharziasis and can be found in Africa, Iraq, Iran, Syria, Portugal, Lebanon and some parts of India.2 The infection is spread when embryonated eggs from an infected person are passed from the urine into water sources, where miracidia hatch and swim about until they invade a suitable snail which serves as an intermediate host. After a period of development in the snail, a cercaria emerges and swims freely in the water until it comes into contact with a human host where it will invade by penetrating through the skin.2The eggs of *S. haematobium* are large, non-operculate with a transparent shell and a prominent terminal spineThe eggs measure 110-170µm by 40-70µm.3 (Figure 1)

*S. mansoni* causes intestinal bilharziasis and can be found in Africa, West Indies, Brazil, Venezuela, Puerto Rico and Surinam. The life cycle is the same as that of *S. haematobium*, except that the eggs are passed into the water from the faeces.2 The eggs of *S. mansoni* are large, measuring 114-180 µm by 45-70 µm and have a characteristic shape, with a prominent lateral spine near the posterior end. The anterior end is tapered and slightly curved.3 (Figure 2)

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**1**

**2**

Terminal spine in

*S. haematobium* egg

Terminal spine in

*S. haematobium* egg

Lateral spine in

*S. mansoni* egg

**Figures 1 & 2.** *Shistosoma haematobium* and *Shistosoma mansoni* eggs respectively.

The occurrence and severity of active schistosomiasis is dependent on parasite density andextent of egg deposition. Praziquantel is stated to be effective against all species but treatment failures are not uncommon, in which case repeat treatment may be appropriate.

REFERENCES

1. [www.cdc.gov.za](http://www.cdc.gov.za). Date accessed: 21 February 2014

2. Ash LR & Orihel TC. (1997). ***Atlas of Human Parasitology***, 4th Ed. ASCP Press, Chicago.

3. [www.dpd.cdc.gov](http://www.dpd.cdc.gov). Date accessed: 21 February 2014

4. Isaäcson M & Frean J. (2002). *DTM&H notes*, NICD NHLS.