THE PATHCARE NEWS

DISCONTINUATION OF THE URINE BILHARZIA CCA ANTIGEN TEST & UPDATED RECOMMENDATIONS FOR THE LABORATORY DIAGNOSIS OF SCHISTOSOMIASIS

PathCare would like to inform you that, with immediate effect, the **Bilharzia Urine CCA** (circulating cathodic antigen) test will no longer be performed at our diagnostic laboratories. Our supplier has advised that the test kits cannot currently be produced, owing to manufacturing problems with the *Schistosoma* antibodies used in the kits and the lack of a suitable alternative that meets WHO product specifications. No other commercial urine CCA kits are currently SAHPRA approved. We apologise for any inconvenience this may cause.

Recommended alternative: Bilharzia PCR on urine

We recommend the **PCR Bilharzia (PMSCHBILH, X5875)** on urine in place of the urine CCA test. Real-time PCR is sensitive and specific for *S. haematobium, S. intercalatum* and *S. mansoni* DNA, and is more sensitive than microscopy, particularly in early and low-intensity infections where eggs are often missed. Unlike microscopy, PCR is not affected by the day-to-day and circadian variation in egg excretion, so a timed midday urine sample is not required.

Test	Request code	Sample type
Bilharzia Urine CCA	~~MUBILCCA (L3446)~~ – discontinued	-
PCR Bilharzia (recommended)	**PMSCHBILH (X5875)**	**Urine**
Bilharzia Microscopy	Urine (MUBIL) or Stool Parasite (MFM)	Urine (collected 12:00–15:00) or Stool
Bilharzia Antibody Tests	SBIL (T1173)	Blood (SST gel tube)

Limitations of Bilharzia PCR on urine

- **Reduced sensitivity for *S. mansoni*.** Although urine is the optimal sample for urogenital schistosomiasis *(S. haematobium), S. mansoni* eggs are passed in stool, and detection in urine relies on small amounts of circulating cell-free DNA. Therefore, a negative urine PCR does not exclude intestinal or hepatosplenic schistosomiasis. Since the CCA test was best suited to *S. mansoni*; for suspected intestinal disease, please consider stool microscopy.
- **Early infection & Katayama fever.** PCR may be negative during the pre-patent period before adult worms begin laying eggs. In recently exposed or acutely symptomatic patients, a negative PCR should be interpreted with caution; serology (from 6–8 weeks after exposure) or repeat testing is advised.
- **Not suitable as a test of cure.** DNA from dead worms and eggs may be detected for weeks to months after successful praziquantel treatment, therefore a positive PCR after therapy does not necessarily indicate treatment failure.
- **Viability and intensity.** PCR detects DNA and cannot distinguish viable from non-viable parasites or reliably indicate infection intensity.
- **Ectopic disease.** A negative urine PCR does not exclude ectopic disease (e.g. neuroschistosomiasis) or infection with low or intermittent DNA shedding.
- **Sample-related factors.** Inhibitory substances in urine and low sample volume can reduce sensitivity. Please submit an adequate urine volume in a sterile container.

Other available tests:

- **Microscopy (MUMIC)** for eggs in urine *(S. haematobium)*, faeces *(S. mansoni)* or bladder/colon biopsy samples remains the gold standard for diagnosing active schistosomiasis. Sensitivity is low, especially in low-intensity and in early or late chronic infections. Urine should ideally be collected between 12:00 and 15:00 to improve the yield.
- **Serology (SBIL, T1173)** is most useful for symptomatic travellers returning from endemic areas. Antibodies may be detected from 6–8 weeks after exposure. A positive IgM suggests recent infection, while a positive IgG suggests recent or past infection. False-positive results, especially IgM, may occur following exposure to animal schistosomes or other soil-transmitted helminths.

Because infections vary in stage and intensity, schistosomiasis is best diagnosed by combining these tests with the exposure history, clinical signs and symptoms, and supporting laboratory findings such as eosinophilia and haematuria.

For queries, please contact clients@pathcare.co.za

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