

INTERPRETATION OF RESULTS^[4]

Each AfinUrimal test comes with a result plate in which patient details and result can be entered.

AfinUrimal Result Plate

Novel urine malaria test **Detecting malaria pigment in urine**

Pat Name: _____ **Num:** _____ **Sex:** _____ **Age:** _____

| Pat OD | Color | OD | PD (parasites / μ l) in 100 Fields | Score |
|--------|-------|------------------|--|----------|
| | 0.08 | ≤ 0.09 | 0 | Negative |
| | 0.16 | $0.09 \leq 0.18$ | $1 \leq 10$ | Trace |
| | 0.28 | $0.18 \leq 0.36$ | $10 \leq 100$ | + |
| | 0.44 | $0.36 \leq 0.54$ | $100 \leq 1000$ | ++ |
| | 0.67 | $0.54 \leq 0.72$ | $1000 \leq 10000$ | +++ |
| | 0.75 | $0.72 \leq 0.90$ | $10000 \leq 100000$ | ++++ |
| | 0.99 | ≥ 0.90 | $100000 \leq 1000000$ | >++++ |

Key: OD = Optical density, PD = Parasite density

Figure 2: AfinUrimal Result Plate

In the absence of a colorimeter or spectrophotometer, an observer can read off the result right from the test tube by comparing the color with the colors in the chart provided with the test kit (figure 2). The optical density can be used to deduce the parasite density^[4].

Note that hydration state of patient plays significant role in the concentration of the pigment as poorly hydrated patient with highly concentrated urine tend to yield higher ODs and vice versa. When optical densities are ≥ 0.90 with scores \geq +++++, the reaction can be doubly diluted, mixed properly and re-run on colorimeter or spectrophotometer immediately. The scores obtained multiplied by 2 to obtain the actual scores and parasite densities.

MATERIALS PROVIDED

1. A 10 mL vial of AfinUrimal test reagent
2. AfinUrimal Result Plate














REFERENCES

1. Ifeanyichukwu Okeke, (2022). A Biochemical Assay Provides Better Diagnosis for Malaria Infection. *Global Scientific Journals: Volume 10, Issue 9, September 2022, Online: ISSN 2320-9186. Pp: 1839-1853*
2. Kemsner P.G., Valim C., Missinou M. A. et al., (2009). Prognostic value of circulating pigmented cells in African children with malaria," *Journal of Infectious Diseases, vol.199, no. 1, pp.142-150, 2009*
- 3.. Alison Gilchrist, Jim Nobbs, (2017). *Encyclopedia of Spectroscopy and Spectrometry (Third Edition).*
4. WHO Malaria Parasite Counting, (2016). *Malaria Microscopy Standard Operating Procedure – MM-SOP09*

MATERIALS REQUIRED BUT NOT PROVIDED

1. Test tube
2. Micro pipette
3. Micro pipette tips
4. Sample container

SYMBOL LEGENDS

| | | | |
|---|------------------------------------|---|----------------------------------|
|  | Afinitest Laboratories |  | Consult instruction for use |
|  | Contains sufficient for 50 tests |  | Keep away from sunlight |
|  | In vitro diagnostic medical device |  | Batch code number |
|  | Store at 2° to 30 °C |  | Catalog number |
|  | Consult instructions for use |  | Do not use if package is damaged |
|  | Do not reuse | | |
|  | | | |
|  | MAN EXP | | |


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Call/SMS/WhatsApp:
+234 8161994393