Widal and Malaria Diagnostic Reports

Experiment 14 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To describe supplied Widal results and prepared malaria images without making an unsupported diagnosis.

Principle

Widal measures an antibody-agglutination response and has important specificity limitations. Malaria diagnosis requires a validated diagnostic method and appropriate interpretation of the clinical context.

Requirements

- Instructor-prepared fixed slides, labelled images, demonstration records or coded teaching data for this practical.
- Activity form, microscope for prepared slides where applicable and calculator.

Procedure

1. Identify the teaching material

Record the slide, image or data code, method name and the assigned comparison. Use prepared material and supplied results for this exercise.

2. Read a Widal report

Record the reported antigens, titres, timing and context. Explain that a single titre does not confirm typhoid; Widal is not recommended by CDC for diagnosis because false positives are common.

3. Review prepared malaria images

Use the instructor-labelled fixed images to identify the shown parasite stage and the relationship to the red cell. Do not infer species from an incomplete unlabelled image.

4. Compare diagnostic evidence

Distinguish direct parasite evidence from an antibody response. Record test limitations and the need for authorised clinical/laboratory review.

5. Document

Keep each finding with its method, date and supplied interpretation; do not combine the two tests into a diagnosis of an individual patient.

6. Assess controls and limitations

Confirm the meaning of the positive, negative, blank or process controls supplied. State which conclusions the results support and which require additional evidence.

7. Complete the record

Enter observations separately from interpretations. Record units, method conditions given with the data and the instructor-reviewed conclusion.

Observations and Record

Record component	Entry
Teaching report / image code	_____
Reported titre or visible stage	_____
Method and timing	_____
Limitations	_____
Need for confirmatory clinical review	_____

Result

Material / data code: ____. Observed result: ____. Control assessment: ____. Interpretation and limitation: ____.

Precautions

- This activity uses prepared material and data interpretation; it is not a live microbial culture or pathogen-handling procedure.
- Keep morphological, quantitative and clinical interpretations separate.
- Use the method-specific assigned quality controls and current interpretive criteria where relevant.

Viva Questions and Answers

1. Does one Widal titre confirm typhoid?

No. Background antibodies, prior exposure and cross-reactions can mislead interpretation.

2. Why use prepared diagnostic images?

They permit study of morphology without handling infectious specimens.

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