

Document Title: Evaluation of Percipitating Anti-sera QC

Controlled: Yes, with red stamp present

Controlled By: Quality Manager

Prepared By: _____

Date: _____

Approved By: _____

Date: _____

A. PURPOSE:

To determine the titer (sensitivity) of a precipitating anti-serum and to determine if the anti-serum cross-reacts with other body fluids and/or other species of bloodstains.

B. RESPONSIBILITY:

Forensic Science Examiners 1 and 2 in the Forensic Biology Section. Ordering information and quality control are maintained in a log book in the Forensic Biology Section.

C. SAFETY:

Use appropriate measures for the proper handling of the Ouchterlony plates according to SOP-GL-2 (Safety Manual) and the Material Safety Data Sheets.

D. DEFINITIONS:

PBS: Phosphate Buffered Saline

E. PROCEDURE:

1. Materials:

- a. Ouchterlony plates
- b. Anti-sera:
 - aa. Animal anti-sera (anti-dog, -cat, -deer, etc.)
 - bb. Anti-human serum
- c. Known bloodstain extracts or thawed sera controls: human and/or animal.
- e. PBS
- f. 0.05% ammonia
- g. Distilled water (dH₂O)
- h. Disposable pipets or micropipet and tips
- i. Microcentrifuge tubes

2. Procedures:

- a. If the anti-serum to be tested is lyophilized, reconstitute according to manufacturer's specifications.

- E. 2. b. Prepare samples for titer determination of human anti-sera:
- aa. Extract a 1cm² portion of a human bloodstain in 100µl of PBS and extract overnight at 4°C.
 - bb. Make dilutions from this neat extract according to the table below.
- c. Prepare samples for the detection of cross reactivity with human and animal anti-sera according to SOP-FB-09 (Species Double Diffusion Test) and step 2.d. below.
- d. Typical samples and suggested dilutions for testing precipitating anti-sera:
- | | |
|------------------|---|
| Anti-human serum | Bloodstain extract: Neat; 1:10, 1:100, 1:500, 1:1T, 1:10T, 1:20T
Semen stain extract
Seminal-vaginal mixture swab extract
Saliva stain extract
Urine stain extract
Vaginal swab extract
Breast milk stain extract
Fecal swab extract
Animal bloodstain extracts |
| Animal anti-sera | Human bloodstain extract
Corresponding animal control bloodstain &/or thawed serum
All available animal bloodstain extracts & thawed sera |
- e. Test the anti-sera according to SOP-FB-09 (Species Double Diffusion Test) and record the results on the Ouchterlony Quality Record Worksheet (FBQR-08), see examples of sample placement on page 4, below.
3. Evaluation:
- a. The highest dilution to yield a positive result is the titer of the anti-serum. Consideration will be taken to determine if the anti-serum has a sufficient titer suitable for use.
 - b. An anti-serum that yields a positive result with a sample other than its corresponding control, exhibits cross reactivity. If this occurs, consideration will be taken to determine if the anti-serum is suitable for use.
 - c. If the appropriate results are not obtained and the anti-serum is determined to be unsuitable for use, review the procedure and replace the anti-serum as needed.

E. 4. If the anti-serum is determined to be suitable for use, store as follows:

a. Anti-serum received in a lyophilized state:

aa. Aliquot 50 μ l volumes of the reconstituted anti-serum into microcentrifuge tubes labeled with the anti-serum type. Store in the freezer in a zip lock bag labeled with the anti-serum, lot #, date received, date reconstituted, titer and examiner's initials.

bb. Store additional bottles with lyophilized anti-serum in the freezer. Label each bottle with the date received and examiner's initials. Re-titrate lyophilized anti-serum after thawing and reconstituting as above.

b. Anti-serum received in a liquid state:

Aliquot 50 μ l volumes into microcentrifuge tubes labeled with the anti-serum type. Store in the freezer in a zip lock bag labeled with the anti-serum, lot #, date received and examiner's initials.

c. Thawed anti-sera may be stored in the refrigerator until consumed. Discard if a decrease in activity or bacterial growth is observed.

d. Avoid repeated freezing and thawing of the anti-serum.

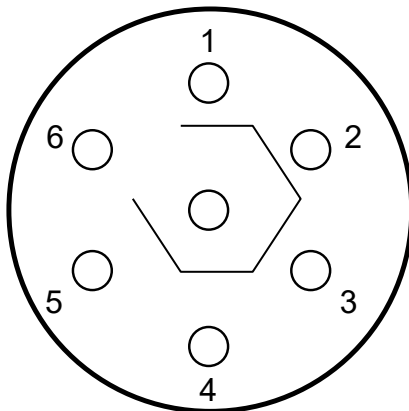
F. REFERENCES:

1. SOP-GL-2 (Safety Manual).
2. Material Safety Data Sheets.

OUCHTERLONY WORKSHEET

I.

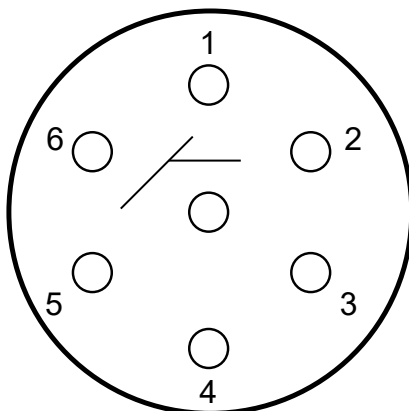
- C - anti-HuSer
- 1 -1:10 human blood
- 2 -1:100
- 3 -1:200
- 4 -1:300
- 5 -1:400
- 6 -1:500



Examiner: K J L
Date: 11/15/99
 α Serum
Lot #: 19H4816
Titer: 1:400
Ouchterlony
Date: 11/01/99

II.

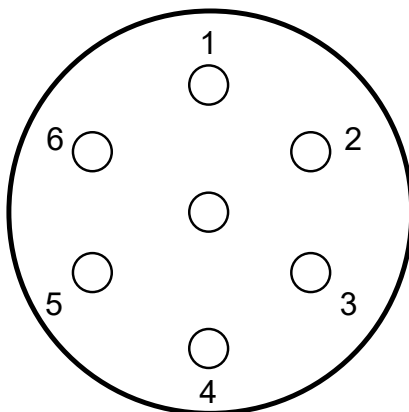
- C -anti-Dog
- 1 -dog serum #55983
- 2 -cat
- 3 -chicken
- 4 -cow
- 5 -deer
- 6 -1:10 human blood



Examiner: KJL
Date: 11/15/99
 α Serum
Lot #: 02727
Titer: N/A
Ouchterlony
Date: 11/01/99

III.

- C
- 1
- 2
- 3
- 4
- 5
- 6



Examiner:
Date:
 α Serum
Lot #:
Titer:
Ouchterlony
Date: