Veterinary Medical
Research & Development

**CERTIFICATE OF ANALYSIS**

# Rocky Mountain Spotted Fever (RMSF)

IFA Substrate Slide

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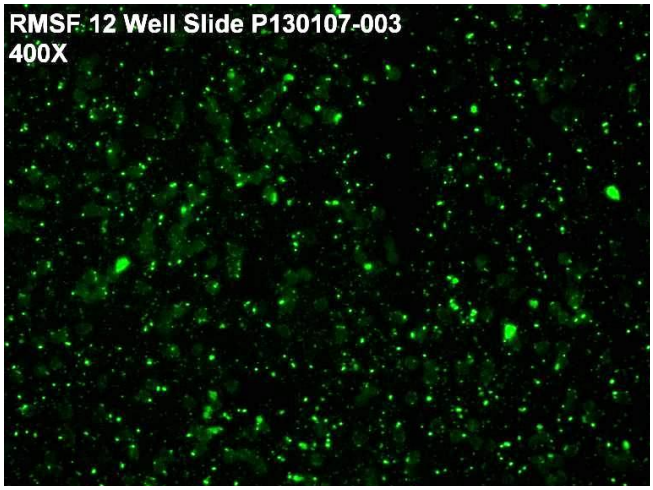
| **Catalog No.:** | SLD-IFA-RMSF |
| **Size:** | 12 Well |
| **Well Capacity:** | 10µl |
| **Lot:** | P130107-003 |
| **Expiration:** | 28 January 2017 |
| **Agent:** | *Rickettsia rickettsia* |
| **Strain:** | Shelia Smith |
| **Cell Culture Substrate:** | N/A |




**Description:**
Slides contain formalin-inactivated *R. rickettsii* with ovine red blood cell background to facilitate focusing with negative sera. They are unstained and sealed in moisture-free foil pouches.

**Quality Control Method:**
IFA using VMRD, Inc. Rocky Mountain Spotted Fever (RMSF) Positive Control (catalog no. PC-IFA-RMSF), RMSF Negative Control (catalog no. NC-IFA-RMSF), and Anti-Canine IgG FITC Conjugate (catalog no. CJ-F-CANG-1ML or 10ML.

**Specific Reaction:** 3-4+ fluorescence with the positive control and negative with the negative control, no background. Organisms are too numerous to count per high power field.

**Other Comments:** N/A

**Pattern Of Fluorescence:**
Fluorescent coccobacilli-like structures among ovine red blood cells. Some clumped.

**Interpretation Of Results:**
Titers of 1/64 (IgG) and greater are considered positive. Positive control sera, with stated endpoints, are available on request (catalog no. PC-IFA-RMSF).

**Intended Use:**
Generally used for Indirect FA to detect antibody to *R. rickettsia,* but may also be used as a positive and negative control substrate slide for Direct FA conjugates when applicable.

**Storage:**
Store sealed in foil pouch at -20°C. Avoid self-defrosting freezers.

**References:** NA

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## Recommended Staining Procedure for Indirect FA:

1. Warm slide to room temperature before removing from foil pouch.
2. Place diluted serum on the designated wells. Dilute serum in serum diluting buffer, pH 7.2 (catalog no. FASDB-100ML) however if high background due to anti-bovine IgG activity is present it may be advisable to use SSDB-100ML.
3. Incubate slide in humid chamber at 37°C for 30 minutes.
4. Using a wash bottle, gently rinse slide briefly in FA rinse buffer, pH 9.0 (catalog no. FARB-4X) and then soak for 10 minutes in FA rinse buffer, pH 9.0.
5. Drain slide and dry around wells by pressing blotter (included in pouch) to front surface. Place labeled anti-IgG or IgM on the wells.
6. Incubate as in step 3.
7. Rinse as in step 4.
8. Drain slide and dry back and edges with a paper towel. Do not allow stained surface to dry. Do not rinse with water.
9. Mount with mounting fluid [glycerol/FA rinse buffer, pH 9.0, (50/50)] (catalog no. FAMF-10ML) and view with good quality fluorescence microscope at 100X-250X. Confirmation may be made at 400X.

## Recommended Staining Procedure for Direct FA:

1. Warm slide to room temperature before removing from foil pouch.
2. Place direct FA conjugate on the designated wells.
3. Incubate slide in humid chamber at 37°C for 30 minutes.
4. Using a wash bottle, gently rinse slide briefly in FA rinse buffer, pH 9.0 (catalog no. FARB-4X) and then soak for 10 minutes in FA rinse buffer, pH 9.0.
5. Drain slide and dry back and edges with a paper towel. Do not allow stained surface to dry. Do not rinse with water.
6. Mount with mounting fluid [glycerol/FA rinse buffer, pH 9.0, (50/50)] (catalog no. FAMF-10ML) and view with good quality fluorescence microscope at 100X-250X. Confirmation may be at 400X.

## Serum Diluting Buffer (pH 7.2):*

- $Na_2HPO_4$……1.19 gm
- $NaH_2PO_4$……0.22 gm
- NaCl……8.55 gm
- BSA…….....10.0 gm
- DI/$dH_2O$……..Q.S. to 1 liter

*This recipe makes 1 liter. If you need less, adjust recipe accordingly. Store at 2-7 C. Add 0.09% $NaN_3$ if diluted serum is not going to be used within one week.

## 4X FA Rinse Buffer (pH 9.0):

- $Na_2CO_3$……11.4 gm
- $NaHCO_3$……33.6 gm
- NaCl…….....8.5 gm
- DI/$dH_2O$……..Q.S. to 1 liter

Final pH should be 9.0-9.5. This is a 4X concentrate and should be diluted 1/4 with DI/distilled water for use as a working buffer. Keep in a tightly stoppered container at room temperature. MOUNTING FLUID is made by mixing glycerol and FA rinse buffer, pH 9.0, in equal proportions.