Be Sure. A simple blood test and you know if your cat is healthy.

Feline SAA handbook
Feline Serum Amyloid A (SAA) picks up on a systemic inflammation when no other signs are clear.

Use Serum Amyloid A

- To determine the extensiveness of the inflammation.
- To determine if selected treatment is effective.
- As a rule in/rule out marker for inflammatory diseases.
- To monitor the post-operative effects and recovery after surgery.

A high Serum Amyloid A value should be an indication to start treatment for relapse, even if other signs are absent.
Near Patient Testing has been an increasing trend within human medicine the last years. Veterinary medicine is starting to embrace this as well. The benefits of having a system that simplifies diagnosis, monitoring treatment and is specifically designed to do so right next to the patient in “real” time are huge.

For an efficient work-flow in an emergency setting, the test must have a short turn around time, optimally less than 15 minutes. Additionally, the test-format has to be easy-to-use so that non-laboratory personnel are able to perform the test.

The immediate detection of an inflammatory response and the monitoring of its clinical course are primary challenges for veterinary medicine.

Systemic inflammation can be initiated by bacteria, viruses, parasites, fungi, neoplasia and trauma.

The search for early inflammation markers has therefore been an important focus in veterinary medical research. Special attention has been on the identification of biochemical parameters that have the sensitivity and specificity to both signal the presence and evaluate the intensity of an inflammatory response.

Acute Phase Proteins is a group of biological markers that have a direct response to a systemic inflammation and a fast decrease in concentration upon removal.

Serum Amyloid A belong to the group of major acute phase proteins in cats. I.e. the serum concentration of SAA increases more, as a result of systemic inflammation, compared to other acute phase proteins in cats (ref. Ceron et. al).
Key benefits of Serum Amyloid A (SAA) as “the Systemic Inflammatory Marker” in cats

- Specific and objective marker for systemic inflammation.
- Real time marker – starts after 4h, significant increase detectable after 8h, peaks after 24h–48h (Ref. Ceron et al.)
- Large diagnostic window – multifold increase in concentration as compared to reference range.
- An elevated serum value always indicates pathology.
- Use SAA to monitor the post-operative effects and recovery after surgery.

All diseases stimulating a systemic inflammation can be monitored, for example:

- Pancreatitis
- Renal failure (feline low urinary tract disease)
- Reactive amyloidosis
- Injury
- Liver disorders
- Infectious peritonitis

LifeAssays Feline SAA System

LifeAssays® Feline SAA test kit provides a point-of-care quantitative measurement of Feline SAA in serum, within 11 minutes. This two-site heterogeneous immunoassay uses magnetically labeled antibodies for detection.

The LifeAssays® Feline SAA test kit helps veterinary professionals to easily integrate SAA measurements as a point-of-care diagnostic tool to diagnose and monitor disease progression as well as treatment efficiency on inflammations in cats.

Repeating a LifeAssays® Feline SAA test during and after treatment (e.g. antibiotics) will show if the selected treatment has been effective and reduced the inflammation or infection, see next page.

Repeating a LifeAssays Feline SAA test after surgery will show recovery and ascertain that no post-operative inflammatory are at hand.

![Graph showing SAA levels over time]

To best make use of a post-diagnostic SAA value it is of great importance to have a pre-diagnostic value, since this will enable you to compare the two.

### Table. Concentration (Mean +/- SD) of SAA in sera from serum mongrel cats subjected to surgery for urinary diversion.

<table>
<thead>
<tr>
<th>Time</th>
<th>SAA serum concentration (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Operation</td>
<td>42 +/- 27</td>
</tr>
<tr>
<td>After Operation</td>
<td></td>
</tr>
<tr>
<td>1st day</td>
<td>121 +/- 29</td>
</tr>
<tr>
<td>2nd day</td>
<td>112 +/- 13</td>
</tr>
<tr>
<td>3rd day</td>
<td>113 +/- 20</td>
</tr>
<tr>
<td>4th day</td>
<td>80 +/- 8</td>
</tr>
<tr>
<td>13th day</td>
<td>28 +/- 14</td>
</tr>
</tbody>
</table>

LifeAssays® Feline SAA system consists of a bench-top instrument (LifeAssays® Veterinary Reader), single-use reagent tests and a disposable algorithm chip. All reagent identification data, as well as, a self-executable algorithm is contained on the disposable algorithm chip providing better traceability and improved system control.

The chip is inserted into the LifeAssays® Veterinary Reader when a new reagent kit is opened and remains in the reader until the last reagent vial in the kit is disposed of. Thus, reagent/software upgrades are easily provided with each new reagent kit.

<table>
<thead>
<tr>
<th>Comparative system</th>
<th>Corr.factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELISA (Tridelta)</td>
<td>0.98</td>
</tr>
</tbody>
</table>

“Save time and money by picking up early inflammation and improve the patients health”
Step 1. Insert the disposable algorithm chip provided with the LifeAssays® Feline SAA Kit. Turn on the LifeAssays® Veterinary Reader.

Step 2. Press enter and insert reagent vial into the instrument.

Step 3. After a background reading of the vial collect 20 μl of the serum sample using a micropipette and pipette it into the reagent vial.

Step 4. Vortex the reagent vial for 30 sec.

Step 5. Place the reagent vial in the LifeAssays® Veterinary Reader. The results will be displayed automatically after 11 minutes.

Step 6. Note the result and unload the reagent vial from the instrument. You can now start a new measurement by pressing the Enter button.