
SAMPLE QUALITY ASSESSMENT BEST PRACTICES

How to use objective terms and not subjective assessments when describing the quality of a Sample.

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In the early planning phases for ZIMS, Groups of subject matter experts from the zoo and aquarium medical community provided guidance on the standardization of data and best practices. This group determined the characteristics of icterus (yellowish pigmentation, jaundice), hemolysis (disintegration of red blood cells) and lipemia (turbidity) were subjective assessments on the quality of a Sample and should be retired in favor of objective terms. Serum/plasma should simply be described with terms like "light pink" or "dark red"; cloudy or opaque, etc. They provided insight that there are a number of species (bongo antelope, flamingo) where the serum is pink without any hemolysis and calling those samples hemolyzed would be misleading and create inaccurate data. There are also reptiles, where hemolysis often produces a green coloration. It is not the "hemolysis" that causes problems with testing, it is the coloration that distorts the test results - dark red serum and light pink serum could both be marked hemolyzed, but the degree of coloration is the significant factor and this can be captured more accurately in ZIMS. This is one example of how ZIMS is responsive to the diverse needs of capturing accurate data on a wide variety of taxonomy.

Best practice tip for sample quality data entry: You may record hemolysis, lipemia or icteric as additional characteristics for ease of data entry, however, if a sample is created and marked as "Pink" for Color and "light" for Color Intensity to indicate hemolysis, and also marked as "Turbid/Cloudy" to indicate lipemia, then you have captured both the degree of hemolysis and the lipemia characteristics. It is also recommended to mark samples with multiple abnormalities as "Degraded" to help weed out samples that are not suitable for inclusion in the global Expected Test Results calculations.

The screenshot shows a web-based data entry form for a sample. The 'Sample Quality' section is highlighted with a red border. It includes the following fields:

- Color:** Pink
- Color Intensity:** light
- Clarity:** Turbid/Cloudy
- Consistency:** Please Select
- Additional Characteristic:** Please Select
- Degraded or Deteriorated:**

When you request a Test on the Sample you have the opportunity to note if the Sample quality has changed and has indications of hemolysis, lipemia or icterus under Additional Characteristic in the Sample Quality area.

The screenshot shows the 'Edit Sample Quality' dialog box. The 'Additional Characteristic' dropdown menu is open, showing the following options:

- Select One --
- 1. hemolysis
- 2. lipemia
- 3. icteric

The 'Degraded or Deteriorated' checkbox is checked.

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