

Lactoferrin Stool WBC Test

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A new commercial test is available that detects the presence of white blood cells in the stool, a finding that is consistent with inflammatory diarrhea. Bacterial inflammatory diarrhea may be caused by Shigella, Salmonella, Campylobacter, and Clostridium difficile. Noninfectious inflammatory diarrhea may be seen in ulcerative colitis and Crohn's Disease.

The new test improves sensitivity and specificity over tests based on the cytological finding of WBC's in the stool. The new assay detects a glycoprotein component of neutrophilic granules called lactoferrin that is present in leukocytes and is released from fecal leukocytes. Detection is accomplished immunologically by a rapid latex agglutination method.

The new screening test will replace the current microscopic method that uses a gram stain of stool. The improved performance of the latex test over the microscopy test is due to the elimination of the variability in lysis of WBC's in the stool. The longer WBC's are exposed to elevated temperatures, the more lysis occurs with fewer intact cells remaining to be seen in cytological preps. Lactoferrin is less sensitive to conditions that support degradation.

Important note: Since lactoferrin is a component of breast milk, the test will be positive in breast fed children and should not be used to evaluate neonates receiving breast milk. However, the test uses a human lactoferrin specific antibody that does not cross react with goat or bovine lactoferrin. Please contact Josh Rowland at jrowland@unmc.edu or 402-559-6070 if you have questions or are interested in setting up the procedure in your laboratory.