

## **Technical Bulletin**

## Fecal Lactoferrin Replacing WBC-Stool (Fecal Leukocytes) To Indicate Inflammation in the Bowel

**TO:** Medical Staff and Clients

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**SUBJECT:** Fecal lactoferrin helps differentiate inflammatory and non-inflammatory diseases

Infectious diarrhea can be classified into inflammatory and non-inflammatory diarrhea. Non-inflammatory diarrheas include those caused by viruses and most parasites and are, for the most part, effectively treated with simple oral rehydration therapy. Inflammatory diarrheas, on the other hand, tend to be more serious and may require additional testing such as stool culture. This type of diarrhea is caused by pathogens such as *Shigella*, *Salmonella*, *Campylobacter jejuni*, and *Clostroides difficile*.

Microscopy can be used as white blood cells (WBC), or fecal leukocytes, should be present in large numbers, however, there are some disadvantages. Variations in the distribution of WBCs in a specimen, slide preparation, reading, WBC degradation, and lower overall sensitivity are some of the reasons DLS is replacing microscopy with an immunochromatographic lactoferrin test (Test code 7682). Fecal lactoferrin will replace WBC-stool on **June 7**, **2021**, WBC-Stool will be converted to fecal lactoferrin.

Fecal lactoferrin is also considered an inflammation biomarker helpful in differentiating patients with active inflammatory bowel disease (IBD) such as Crohn disease and ulcerative colitis from those with inactive IBD, as well as from noninflammatory irritable bowel syndrome (IBS). However, the use of fecal calprotectin (Test Code 4173) appears to be more widespread (Lopez, et al. 2016. J Gastro Hepatol. 32:577).

The sensitivity compared to fecal WBC is 93%. Although the specificity is reported at 80%, the fecal WBC is an imperfect "gold standard" for reasons listed above. It is likely that many of the discrepant results were actually false negative microscopy.

Test	Specimen	Unit Code	Collection	Turn-around Time
Fecal	Raw, unpreserved stool	7682	Daily	<24 hours from receipt
Lactoferrin				of sample

Specimen stability is 2 days ambient and 2 weeks at 2-8°C (refrigerated).

Please refer any questions to Terrie Koyamatsu, Manager - DLS Microbiology Laboratory at 589-5196, or DLS Client Services at 589-5101.