GASTROENTEROLOGY TESTS

ADVANCED GASTROINTESTINAL DIAGNOSTICS FOR DOGS & CATS

Fast, Reliable and Non-Invasive
In-Clinic Solutions



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Advanced gastrointestinal diagnostics for dogs & cats

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Early diagnosis of gastrointestinal (GI) disorders is crucial to preventive and effective veterinary care.

While traditional diagnostic approaches often rely on invasive or stressful procedures, advances in veterinary diagnostics now enable clinicians to obtain valuable clinical information through highly specific, non-invasive fecal biomarkers.

Agrolabo S.p.A. supports this approach with two innovative in-clinic diagnostic solutions: **GIQuest**, for the detection of **fecal calprotectin**, and **FOB IC**, for the detection of **fecal occult blood** (FOB) and **intact red blood cells**. Together, these rapid tests provide objective insights into intestinal inflammation and gastrointestinal bleeding, supporting early diagnosis, timely clinical decision-making, and improved patient management.

By integrating rapid in-clinic testing with clinically relevant biomarkers, GIQuest and FOB IC help clinicians detect GI disease earlier, monitor intestinal health more effectively and make informed diagnostic and therapeutic decisions while minimizing stress for their patients.

Why integrate both tests into veterinary practice?

By combining GIQuest and FOB IC, the clinic receives a comprehensive, rapid and scientifically validated overview of the GI tracts in dogs and cats.

Fast confirmation during check-up
GIQuest and FOB IC confirm inflammation and active GI bleeding in only **10 - 15 minutes** in clinic.

Optimisation of the diagnostic procedure
GIQuest and FOB IC avoid unnecessary, invasive and costly diagnostic procedures when scores and markers are normal.

Monitoring of the clinical response
GIQuest and FOB IC allow for the monitoring of responses to treatments, diet and medication in an objective and accurate manner over time

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FOB IC

Rapid assay based on dual-target technology

Simultaneous Detection of Fecal Occult Blood and Intact Red Blood Cells in Dogs and Cats

Fecal occult blood is often the very first sign of severe conditions, including GI ulcers (frequently induced by NSAIDs), parasitosis, chronic inflammatory bowel diseases (IBD) and intestinal neoplasia.

FOB IC by Agrolabo is a rapid diagnostic assay based on an **innovative** and **unique dual-target technology**, designed to enhance diagnostic accuracy by simultaneously detecting **free Hemoglobin** (Hb) and **intact Red Blood Cells** (RBCs) in **canine** and **feline** stool samples, allowing veterinarians to **localize the origin of GI damage** and in establishing a correct diagnosis for the patient.

FOB IC is available in **two species-specific formats**: one for **canine samples**, the other for **feline** ones.

FOB IC combines high analytical accuracy, convenience and reliability, making it the best choice for occult blood and RBCs testing in fecal samples.

The clinical importance of dual detection

Unlike traditional tests that only target free hemoglobin, FOB IC features a **unique, double-strip structure** to simultaneously detect two independent markers:

- **Strip #1:**
  Free Hemoglobin. A positive result indicates **proximal** or **chronic bleeding**. In this case, hemoglobin is released as a result of the breakdown of red blood cells during the digestive process.
- **Strip #2:**
  Intact RBCs. A positive result indicates **active** and **fresh bleeding** from the distal GI tract.

Intact Red Blood Cells (RBC)

Indicate active, fresh bleeding from the distal GI tract (colon, rectum). The RBCs are not degraded by the digestive processes.

Free Hemoglobin (Hb)

Indicates chronic haemorrhage or GI proximal bleeding. The RBC were degraded by the digestive processes.

Why choose FOB IC?

Compared with the traditional guaiac test (gFOBT), **FOB IC** offers a more advanced approach to fecal occult blood detection.

- **Advanced Technology & Increased Specificity.** Highly specific **immunochromatographic** antigen–antibody assay compared to the chemical pseudo-peroxidase reaction in the guaiac test.
- **Comprehensive Detection of Gastrointestinal Bleeding.** The dual detection (Hb and intact RBCs) in the FOB IC test allows for a more detailed assessment of the source of the bleeding.
- **No Dietary Restrictions.** Unlike the traditional guaiac test which regularly causes **false-positive results** triggered by meat-based diets or specific vegetables, FOB IC requires **no special diet**, making testing simpler and more convenient.
- **Greater Specificity.** In FOB IC, monoclonal antibodies ensure **high analytical specificity**, minimizing diet-related false-positive results.
- **Simple Execution.** The FOB IC test allows both test strips to be analysed using the same pipette, making the test fast, convenient and easily integrated into routine clinic practice.

Feature	Traditional Guaiac Test (gFOBT)	FOB IC (Agrolabo)
Methodology	Chemical pseudo-peroxidase reaction	Immunochromatography (Antigen-Antibody reaction)
Targets	Free hemoglobin (heme group) only	Free Hemoglobin + Intact RBCs
Dietary Restriction	Mandatory	None
Specificity	Low (diet-related false positives)	High (highly specific monoclonal antibodies)

Validation

Species	Threshold	Sensitivity	Specificity
Dog	1 µg/mL Hb (~30 µg/g of feces)	100%	100%
	10^7 and 10^8 RBC/mL	100%	100%
Cat	8 µg/mL (~260 µg/g of feces)	100%	100%
	10^7 and 10^8 RBC/mL	100%	100%

Clinical benefits

- **No Dietary Restrictions**
- **Non-Invasive:** Sample collection and analysis are carried out without animal stress.
- **Rapid & In-Clinic Protocol:** Execution easily performed in only 10-15 minutes.
- **High Sensitivity** and **Specificity** in both canine and feline samples, eliminating false positives
- **Convenient Storage:** Practical kit storage is maintained at room temperature (+18-25°C)

TECHNICAL CHARACTERISTICS

Format	5 and 10 tests
Test method	Immunochromatographic assay
Target	Feline and canine haemoglobin and intact red blood cells
Species	Dog and Cat
Samples	Stool
Reagents	Specific anti-hemoglobin and anti-red blood cells antibodies
Results	Visual reading
Sensitivity (Hb)	100% 1 µg/mL (Dog); **8 µg/mL (Cat)** 100%
Sensitivity (RBC)	100% 10^7 - 10^8 RBC/mL
Specificity	100%
Validity	18 months
Storage	Room temperature (+18-25 °C)
Usage	For veterinary use only

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GIQuest

The innovative rapid test for fecal calprotectin in dogs and cats

A New Partner for Managing Chronic Enteropathies

GIQuest is a rapid test for the **quantitative determination of fecal calprotectin** in dogs and cats.

Elevated calprotectin concentrations are associated with a range of GI disorders, including enteritis, chronic inflammatory enteropathies (CIE), inflammatory bowel disease (IBD), food-responsive enteropathy (FRE) and GI inflammation related to NSAID drugs administration.

Calprotectin: the biomarker of intestinal inflammation

Fecal **calprotectin** is a highly specific, non-invasive **biomarker of intestinal inflammation** in dogs and cats. During GI inflammatory diseases, immune response activation triggers neutrophils to migrate into the intestinal lumen. Then, the activated neutrophils disintegrate and release calprotectin, which is excreted in the feces.

Measuring faecal calprotectin enables assessment of the **severity of intestinal inflammation**, helping veterinarians to recommend dietary or pharmacological treatments.

Key features & clinical utility of calprotectin

- **High Fecal Stability:** calprotectin remains remarkably stable for up to 3 days at room temperature (+18-25 °C), thereby facilitating sample collection, storage and transport.
- **Reliable Indicator of Intestinal Inflammation:** Elevated fecal concentrations are directly indicative of active gastrointestinal inflammation, such as acute enteritis and Chronic Inflammatory Enteropathies/ (CIE/IBD).

Quantitative interpretation & thresholds

The GIQuest test utilizes a **visual quantitative scorecard** to correlate the test line's color intensity with specific numerical scores (1 to 10), corresponding directly to fecal calprotectin concentration (mg/kg).

DOGS

- **Score < 2 (< 2.5 mg/kg):** Normal / healthy
- **Score = 2 (2.5 mg/kg):** Borderline concentration
- **Score ≥ 3 (≥ 3.0 mg/kg):** Inflammatory enteropathy

CATS

- **Score < 1 (< 2.0 mg/kg):** Normal / healthy
- **Score = 1 (2.0 mg/kg):** Borderline concentration
- **Score ≥ 2 (≥ 2.5 mg/kg):** Inflammatory enteropathy

Validation

The diagnostic performance of GIQuest was evaluated in dogs and cats using healthy and diseased populations:

- **Control Group:** Clinically healthy animals, with no history of GI disease, no recent GI disorders, no drug therapy or restrictive diet
- **Disease Group:** Animals diagnosed with chronic enteropathy (CE) confirmed by histopathological examination (reference standard)

The inclusion of both healthy and diseased animals allowed assessment of the test's ability to accurately differentiate normal from inflammatory GI conditions.

Species	Threshold	Sensitivity	Specificity
Dog	Score ≥ 3 (3.0 mg/kg calprotectin)	94%	96%
Cat	Score ≥ 2 (2.5 mg/kg calprotectin)	92%	100%

Clinical applications & case study results

- **Monitoring of Food-Responsive Enteropathy (FRE):** Faecal calprotectin levels decrease after the adoption of an appropriate diet.
- **Oncological Screening:** Animals affected by carcinoma show a highly elevated calprotectin level than healthy control ones, due to local inflammation associated with neoplastic lesions.
- **Monitoring Drug-Induced GI Injury:** in some animals receiving oral **Non-Steroidal Anti-inflammatory Drugs (NSAIDs)**, the calprotectin levels increased post-treatment, demonstrating early-stage drug-induced mucosal inflammation before clinical symptoms appeared.

*NOTE: Although fecal **calprotectin does not replace histopathology** which remains the gold standard for defining gastrointestinal pathology. **GIQuest** is a **non-invasive screening tool** to integrate within the patient's complete diagnostic workup (history, clinical examination and laboratory profile).*

Clinical benefits

- **Quantitative Determination:** GIQuest utilizes a visual scorecard to correlate the test line's color intensity with specific numerical scores (1 to 10), corresponding directly to fecal calprotectin concentration (mg/kg). The score is correlated with the clinical severity of the chronic enteropathy: a higher score indicates greater intestinal inflammatory activity.
- **Non-Invasive:** Sample collection and analysis are carried out without animal stress.
- **Rapid & In-Clinic Protocol:** Execution easily performed in-clinic in only 15 minutes.
- **Clinically Validated:** Based on effective veterinary trials and academic studies, GIQuest effectively distinguishes healthy pets from those with histologically verified inflammatory enteropathy.
- **High Sensitivity** and **Specificity** in both dogs and cats.
- Suitable for **early screening** and **monitoring** of chronic GI inflammation.
- Recommended for **follow-up** to evaluate **therapeutic** and **dietary efficacy**.
- **Convenient Storage:** Practical kit storage is maintained at room temperature (+18-25°C).

TECHNICAL CHARACTERISTICS

Format	10 tests
Test method	Immunochromatographic reaction
Target	Feline and canine calprotectin
Species	Dog and Cat
Samples	Stool
Reagents	Specific anti-calprotectin antibody
Results	Visual reading
Sensitivity	94% (Dogs); 92% (Cats)
Specificity	96% (Dogs); 100% (Cats)
Validity	12 months
Storage	Room temperature (+18-25°C)
Usage	For veterinary use only
Storage	Room temperature (+18-25 °C)
Usage	For veterinary use only

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