



## **ANALYTICAL SERVICES**

# **MICROBIAL ANALYSIS**

SGS North America's Agricultural Services laboratories have the facilities, equipment and experience to service your complete food and feed testing needs. SGS routinely tests the quality of meat, fresh food, processed food, dairy products, pet food, livestock feed, co-products and grain. With cutting edge technology and standardized testing methods, SGS laboratories are equipped to meet your needs. Our trained scientists and technicians hold advanced degrees in chemistry and microbiology, as well as years of laboratory experience. Our laboratories are ISO 17025 accredited and are recognized by several food and feed associations as approved laboratories.

## MICROBIAL ANALYSIS

Testing for bacterial contamination is an important part of a food and feed safety monitoring program. SGS uses standardized PCR (Polymerase Chain Reaction) protocols to test for the presence of *E. coli*, *E. coli* 0157:H7, *Salmonella* and *Listeria*. We also use traditional plate methods and culture identification for many forms of bacteria using official methods (ie. FDA, AOAC, AOCS, MFHPB, USP, etc.)

### SALMONELLA AND LISTERIA MONOCYTOGENES

SGS uses the PCR method to amplify specific fragments of bacterial DNA, which are stable and unaffected by growth environment. The fragments that are amplified relate to the genetic sequences unique to *Salmonella* or *Listeria monocytogenes*, thus providing a highly reliable indicator of whichever organism is present.

### E. COLI AND E. COLI 0157:H7

SGS uses PCR technology to determine if *E. coli* is present in your food or feed product. Two different testing protocols are used to identify samples containing all *E. coli* species and samples containing the *E. coli* 0157:H7 strain. This system targets a specific fragment of the bacterial DNA unique to the *E. coli* 0157:H7 allowing us to easily screen for the presence of the bacteria and/or to determine the presence of the *E. coli* 0157:H7 strain.

### CAMPYLOBACTER

SGS uses a plate method that allows for confirmation of this organism.

SGS offers many other microbial tests to suit your needs. Please call for more information regarding tests not listed here.

### COLIFORM COUNT AND E. COLI

SGS uses a coliform count to determine the amount of coliforms such as *E. coli* and others in your food or feed product by plating a small amount of product onto a specific medium and the number of coliform forming colonies are counted.

### STAPHYLOCOCCUS AUREUS

SGS uses a plate count to determine the amount of *Staphylococcus aureus* in your food and feedproduct. A portion of the sample is diluted and plated onto a selective medium. The number of colonies that form are counted and from this the amount of *Staphylococcus aureus* in the sample can be determined.

### AEROBIC PLATE COUNT

The aerobic plate count is used to determine the amount of viable microorganisms in your food and feed product. A portion of the product is mixed with a specific medium allowing the bacteria to multiply and the bacterial colonies that form are counted.

### YEAST AND MOLD

The amount of yeast or mold in a food and feed product can be determined by diluting the food sample and plating onto a selective medium. The yeast and mold colonies that form are counted and the amount of yeast and mold in the sample can be determined.

### CONTACT DETAILS

#### SGS S.A.

Agricultural Services  
1, Place Des Alpes,  
CH-1211 Geneva

F: +41(0)22 739 98 04

E: [agriculture@sgs.com](mailto:agriculture@sgs.com)

[www.sgs.com](http://www.sgs.com)

Method	Test	Turn Around Time
PCR	<i>E. coli</i>	4 days
PCR	<i>E. coli</i> 0157:H7	4 days
PCR	<i>Salmonella</i>	4 days
PCR	<i>Listeria monocytogenes</i>	4 days
Coliform Count	<i>E. coli</i>	7 days
Plate Count	<i>Staphylococcus aureus</i>	7 days
Plate Count	<i>Campylobacter</i>	7 days
Plate Count	Aerobic Plate Count	7 days
Plate Count	Yeast and Molds	7-10 days
Varies	Other Bacterial Testing	Call for more information

SGS IS THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY



WHEN YOU NEED TO BE SURE

SGS