



**To determine the presence of anaerobic bacteria
Used in oil, gas and petrochemical industries, air industries,
food industries, water and waste water,
and other industries.**

Anaerobic bacteria are a diverse group of heterotrophic bacteria, which are divided into three categories based on their need for oxygen. The first group are obligate anaerobic bacteria that do not grow in the presence of oxygen. The second group is facultative anaerobes that are able to grow in the presence or absence of oxygen. The third group are anaerobic bacteria that can grow only in the presence of a small amount of oxygen, but show better growth in the absence of oxygen. Anaerobic bacteria can be gram-positive or gram-negative and grow in a wide range of culture medium. The major concerns regarding these bacteria include clinical infections caused by them as well as microbial corrosion in metal facilities.

MicrobCheck™ ANA test kit is designed as a 50 ml falcon containing culture medium and floating ball.

Manufacturer's Recommendation

Avoid contact with the inner wall of the Falcon. Perform the test under sterile conditions.

After opening the Falcon, place it upside down on a clean surface.

Do not shake or rotate the Falcon after the sample is added. Let the ball float on the surface of the liquid.

Many anaerobic bacteria do not grow directly in water, but grow in the depths and in biofilms. Make sure to take the sample from the right place. Because if sampling is done from running water and the result is negative, there is still a possibility of anaerobic bacteria in biofilms.

Test Method

Preparation

Collect at least 25 ml of sample.

Pour the amount of 19 ml of the sample into the test falcon.

Write the date and sample name on the kit label and stick it on the falcon.



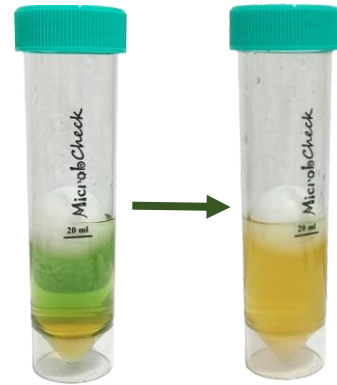
Incubation

Incubate the falcon in an incubator with a temperature of 37 °C or at room temperature (21-25 °C) away from sunlight. Observe the sample daily for 8 days. Note the date the first reaction was observed.

Presence / Absence

In this kit, a rich culture medium is used to support the growth of various types of anaerobic bacteria. Due to the placement of the ball on the surface of the culture medium, the conditions inside the falcon include a gradient from low oxygen around the ball to the absence of oxygen at the bottom of the falcon. In fact, the lower part of the falcon is in a completely anaerobic condition and the degree of anaerobicity of the culture medium gradually decreases until the top of the falcon and reaching the ball. In this way, obligate anaerobic bacteria will grow in the lower part of the falcon, facultative anaerobic bacteria will grow around the ball, and anaerobic bacteria will also grow throughout the medium inside the falcon.

If there are any anaerobic bacteria in the sample added to the kit, 1 to 8 days after inoculation, bacterial growth will be visible by creating a yellow color and turbidity in the culture medium.



Estimation of Population and Aggression Level

If the test result is positive, the population of bacteria and their aggression level can be estimated according to the table below. The greater the bacterial population, the faster the reaction occurs.

Aggression Level	Time Lag (day)	Population (cfu/ml)
Very aggressive	1	700,000
Very aggressive	2	450,000
Moderately Aggressive	3	65,000
Moderately Aggressive	4	50,000
Normal Background	5	-
Normal Background	6	-
Normal Background	7	-
Normal Background	8	-

Quality Control of MicrobCheck™ ANA Test Kit

To confirm the quality and performance of the MicrobCheck™ ANA test kit, the specified strains can be cultured and the results checked. After adding the bacterial dilution, wait until the suspension enters the culture media and avoid shaking the falcon. Store the kit at room temperature or 37 °C and observe the reactions for at least 5 days.



Organism (ATCCC)	Pattern
<i>Escherichia coli</i> (25922)	Yellow and Turbid
<i>Staphylococcus aureus</i> (25923)	Yellow and Turbid
<i>Campylobacter jejuni</i> (29428)	Yellow and Turbid
<i>Clostridium perfringens</i> (13124)	Yellow and Turbid

Best Time to Use

The expiration date of the kits is 6 months and it is necessary to store them in the refrigerator (4-8°C). It is recommended to avoid frequent temperature changes and storage in the freezer.

Disposal

Test kits are completely contaminated after use and bacterial growth. As a result, they need to be autoclaved or burn them in a furnace. If this is not possible, open the falcons under the laboratory hood and fill it with bleach liquid with a concentration of 5 to 10%. Let it sit overnight and then throw it away.

