

**To identify and count total *coliforms* in liquids,
on surfaces or in air.**

Contamination of food and water caused by intestinal bacteria is a serious problem. *Coliform* bacteria are indicator to check the health and safety of water and food. *Serratia*, *Enterobacter*, *Citrobacter*, *Hafnia*, *Yersinia* and *Klebsiella* are among *coliform* bacteria. The detection of *E. coli* bacteria is also considered to indicate faecal contamination that recently occurred during food production or to investigate an unsanitary process. In addition to natural things that contaminate water, such as animal waste, floods, the presence of various insects, etc., contamination can also occur in tanks and even undesirable piping. For this reason, the necessity of investigating contamination in other sources should also be considered.

The MicrobCheck™ C/E kit is specific for *coliforms* and the chromogenic substrate used is seen as an insoluble green-blue color after digestion by *coliforms* and *E. coli*.

The accuracy of these kits is no different from common agar media and the ease of use in industrial areas is important. Working with these kits does not require special expertise and all people can use them easily. It is enough to do liquid, surface and air sampling according to the instructions. The use of these kits without expensive and time-consuming processes and devices brings accurate results.

If you prepare a dilution from the desired sample, it is necessary to report the result for the main sample at the end. For example, a sample has a contamination of 10^7 bacteria per ml. If 1 ml of it is added to 99 ml of water and the number of bacteria in this new dilution is examined, the amount of 10^5 bacteria per ml for this dilution is equal to 10^7 bacteria per ml of the original sample.

The MicrobCheck™ C/E kit is in the form of a slide and the examined surface is 8 square centimeters.

Manufacturer's Recommendation

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

After opening the Falcon door, place the door upside down on a clean surface with the bottom facing the ground.

Test Method

Liquid Sampling: After taking out the slide from inside the sterile falcon, dip it into the liquid under investigation and wait for ten seconds, then take out the slide and wait for a few seconds until the excess liquid is removed from the surface of the slide. After that, put the slide back into the falcon and close the falcon door well.



Surface Sampling: Remove the slide from the sterile falcon and examine it in direct contact with the surface. The contact of two surfaces should be in such a way that the agar medium of the slide is completely stretched over the examined surfaces so that the maximum bacterial recovery takes place.

Air Sampling: Take the slide out of the sterile falcon and expose it to air for 15 minutes and then put it back inside the falcon.

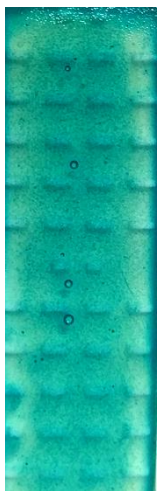
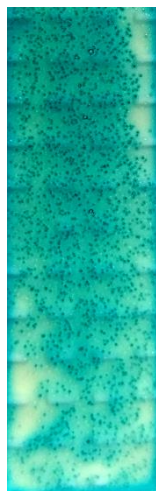
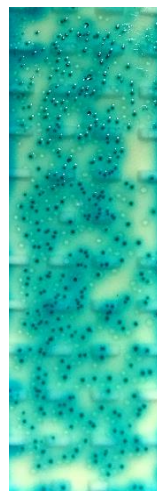
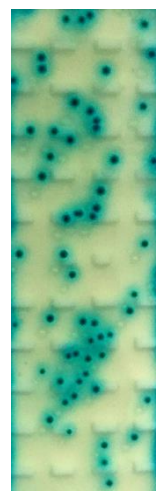
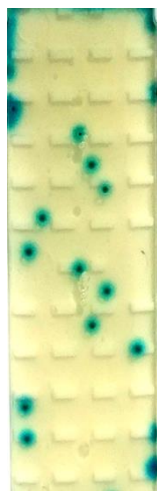
Incubation: Incubate the falcon containing the slide at 35-37 °C for 16-24 hours.

Interpretation of Results

Compare the growth pattern of the bacteria grown in blue-green color with the reference images. The number is calculated based on colony forming units (CFU) per ml. Blue-green bacteria include all *coliforms* and *E. coli*. If the indole test is positive, the blue-green bacteria will be *E. coli*.

Note that MPN (Most Probable Number) estimates the concentration of bacteria based on the growth in the broth medium.

Sometimes a blue-green color may appear around the slide, which does not affect the counting of colonies and is not calculated.

CFU / ml	$\geq 10^6$	10^5	10^4	10^3	10^2
Reference Images					

MicrobCheck™ C/E Test Kit Quality Control

To confirm the quality and performance of the MicrobCheck™ C/E kit, the specified strains can be cultured and the results can be checked based on the table below. To perform this test, prepare a diluted suspension of the reference bacteria and immerse the slides of the kit in it.



Organism	Growth	Colony Color	Indole Reaction
<i>Escherichia coli</i>	+	Blue-green	+
<i>Salmonella enterica</i>	+	-	-
<i>Enterococcus faecalis</i>	-	-	-
<i>Staphylococcus aureus</i>	-	-	-
<i>Citrobacter freundii</i>	+	Blue-green	-
<i>Enterobacter cloacae</i>	+	Blue-green	-

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. Avoid freezing. It is possible to see a small amount of moisture in the bottom of the falcon. This does not affect the performance of the test kit. In case of improper storage, a sign of growth, dehydration or separation of agar from the slide may be observed. In this case, do not use test kits.

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.

