



**To simultaneously identify and count the number of intestinal coliforms and *E. coli* in liquids or on surfaces**  
**Used in oil, gas and petrochemical industries, air industries, food industries, water and waste water, pharmaceutical, etc.**

Contamination of food and water caused by intestinal bacteria is a serious problem. *Coliform* bacteria are an 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 has 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 insects, etc., contamination can also occur in tanks and even undesirable plumbing. For this reason, the necessity of investigating contamination in other sources should also be considered.

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

Due to the fact that contaminated water may not have a bad taste or smell, most water contaminations cannot be identified without proper methods. The presence of *coliform* and *E. coli* bacteria in drinking water shows that it is necessary to purify water. If contamination is observed in the water being purified, it means that sufficient purification has not been done to remove all living microbes. If water purification is not done completely, this water can potentially be toxic and cause illness.

The MicrobCheck™ *E. coli* / *Coliform* test kit is a test based on special and exclusive enzyme substrates, which can be used to easily count *coliform* and *E. coli* bacteria at the same time, thus helping laboratories. It makes sure that the water is safe. The presence of *coliforms* in the sample is determined by orange colonies and the presence of *E. coli* by the formation of red-orange colonies on the culture medium.

MicrobCheck™ *E. coli* / *Coliform* slides have two different culture media on both sides of the slide and the examination surface with dimensions of 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, place the door upside down, with the bottom facing the ground, on a clean surface.



### 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 inside 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 slides at 35-37 °C for 18-24 hours.


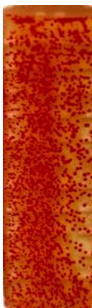
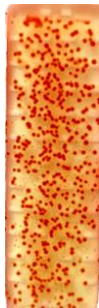
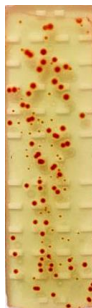


### Interpretation of Results

Compare the growth pattern of *coliform* bacteria and *E. coli* with the reference images. In this test kit, *coliform* bacteria are identified with orange color and *E. coli* bacteria with red color. The number is calculated based on colony forming units (CFU) per ml.

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

Sometimes, a red or orange color may appear around the slide, which does not affect the counting of colonies and is not calculated.

**Total *E. coli* and *coliforms* Count**

CFU / ml	10 <sup>7</sup>	10 <sup>6</sup>	10 <sup>5</sup>	10 <sup>4</sup>	10 <sup>3</sup>	10 <sup>2</sup>
Reference Images						



### Quality Control of the MicrobCheck™ E. coli / Coliform Test Kit

To confirm the quality and performance of the MicrobCheck™ E. coli / Coliform 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 microorganism and immerse the kit slides in it.

Organism (ATCC)	Colony Color
<i>Escherichia coli</i> (25922)	Red
<i>Citrobacter freundii</i> (8090)	Orange

### Best Time to Use

The expiration date of the kits is 6 months and it is necessary to store them in the refrigerator. It is recommended to avoid frequent temperature changes and freezing. It is possible to see a small amount of moisture in the bottom of the Falcon. This has no effect on the performance of the test kit. In case of improper storage, signs 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, it is necessary to autoclave them 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.

