To determine the presence of *Pseudomonas* bacteria Used in oil, gas and petrochemical industries, air industries, food industries, water and waste water, other industries with special formulations to check different samples such as: drinking water, waste water samples and food samples.

Pseudomonas are found in oxygenated waters rich in organic pollutants such as diesel, solvents, etc. The presence of *Pseudomonas* in the samples indicates biological and aerobic decomposition in the system, after which sediments will be formed in the system. *Pseudomonas* are able to produce fluorescent pigments, which are considered dangerous from a health point of view.

The presence of *Pseudomonas* bacteria in water samples is associated with many problems such as the formation of masses called slime, turbidity, bad taste and smell, corrosion, biodegradation and health problems. The presence of these bacteria is usually associated with the smell of fish or kerosene. The presence of *pseudomonas* that produces aggressive fluorescent should be taken into account because it can be associated with skin, eye, ear and urinary tract infections.

Pyocyanin and pyoverdine are the two main pigments produced by *pseudomonas*. Pyocyanin is a pigment characterized by a bluish color and is caused by the presence of *Pseudomonas aeruginosa*. This strain is usually associated with clinical samples such as wounds, burns, ear inflammation, lung ulcers, and urinary tract infections, and it is considered an important health problem in the waters of recreational areas. to be

Pyoverdine is another pigment produced by different strains of *Pseudomonas*. This pigment is characterized by a greenish yellow color. The production of this pigment is related to the presence of *Pseudomonas fluorescent* strain and it is usually seen in food spoilage such as eggs, cooked meat, fish and milk. Sometimes, other pigments with insoluble and non-fluorescent colors are also produced, which can include yellow, beige, orange or red-brown colors. Unlike fluorescent pigments, these colors are transitory.

MicrobCheck™ FLOR test kit is designed based on the production of these pigments. The production of water-soluble fluorescent pigments is caused by the presence of a dominant population of *Pseudomonas*. These pigments are visible around the ball and approximately 20 mm above the liquid column. It is possible to detect these pigments using a UV lamp at a wavelength of 400 nm.

The MicrobCheck™ FLOR test kit is designed as a 50 ml falcon containing culture medium and a 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 the door upside down, with the bottom facing the ground, on a clean surface.

Test Method

Preparation

Collect at least 25 mL of sample.

Pour 19 ml of the sample into the falcon and close it.

Write the date and name of the sample on the label.

Incubation

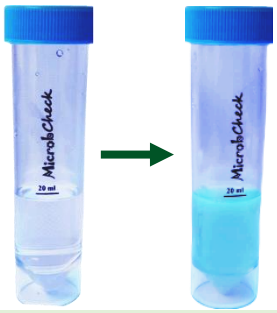
Incubate the Falcon at room temperature (21-25°C) away from sunlight.

Check the sample daily for 8 days. Place the kits in front of the UV lamp to observe the fluorescence.

Presence / Absence

In the positive reaction and growth of *Pseudomonas*, by placing the falcon in front of the UV lamp, a fluorescent glow is observed around the ball.

If the *Pseudomonas* has not grown in the falcon, by placing the falcon in front of the UV lamp, no fluorescent glow will be observed around the ball.



Pattern

Pale Blue (PB) :This pattern is characterized by a pale blue glow under UV light and will be visible around the ball for 2-3 days. *Pseudomonas aeruginosa* strain is more likely to present in this pattern.

Greenish-Yellow (GY) :This pattern has a greenish-yellow glow under UV light and will be visible around the ball for 4-8 days. The possibility of the presence of fluorescent *Pseudomonas* strain group is more in this pattern.

Note that if the strain of *Pseudomonas aeruginosa* is positive in a sample, it is necessary to perform more tests in a microbial laboratory using the sample in the positive test kit or to collect a new sample.

Estimation of Population and Aggression Level

If the test result is positive, estimate the bacterial population and aggression level according to the table below. A faster reaction occurs when the bacterial population is higher. In general, the faster the turbidity and fluorescent is observed, it indicates that the bacterium in question has a higher aggression level.

Aggression Level	Time Lag (day)	Population (cfu/ml)
Very Aggressive	1	1,000,000
Very Aggressive	2	100,000
Very Aggressive	3	10,000
Very Aggressive	4	5,000
Very Aggressive	5	1,000
Moderately Aggressive	6	100
Moderately Aggressive	7	≤ 100
Moderately Aggressive	8	≤ 100

Quality Control of MicrobCheck™ FLOR Test Kit

To confirm the quality and performance of MicrobCheck™ FLOR test kit, the specified strains can be cultured and reaction patterns can be checked. Keep the kit at room temperature and check the reactions for 8 days.

Organism (ATCC)	Pattern
Pseudomonas aeruginosa (27853)	PB
Staphylococcus epidermidis (12228)	No Growth

Best Time to Use

The expiration date of the kits is 6 months and it is necessary to keep 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 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.