PL01B-PWTSEW¥EFL

Eflochem Potable W ater / Sewage Water Kit

MANUAL

EFLOCHEM CHEMICALS • P.O. BOX# 12282 • DUBAI-UAE
TEL:# +9714 3472900 • FAX# +9714 3477072 • sales@eflochem.com • www.eflochem.com

WATER TREATMENT

TESTING METHODS

PERMANGANATE VALUE (PV)

(BOD / COD & TOC)

The Permanganate Value is determining the general quality of Final Effluents in sewage.
Based on the results it will give the OK for the discharge of Sewage water.
The test procedure is relatively easy and consists of 4 steps:

- Three sample containers in the set must be filled with 100 ml of Sewage Effluent.
- Add two Acidifying SE tablets per sample container and shake it to mix well.
- Add one permanganate value tablet to the first sample container, then add two permanganate tablets to the second and three tablets to the third, and again shake them well until it all of them are mixed and dissolved.
- Wait 30 minutes! Then check how many tubes have remained pink and read the result from the following table:

Container Pink	Permanganate Value	Grading
3	0 - 10	Perfect
2	10 - 20	Satisfactory
1	20 - 30	Dubious
None	30 or more	Not allowed to discharge

In the Test Kit you will also find instructions for the testing of Crude waste, the same is valid for Settled sewage.

BOD / COD & TOC

BOD = Biochemical Oxygen Demand
COD = Chemical Oxygen Demand
TOC = Total Organic Carbon

The results from this test are in connection with the Permanganate Value (PV) as done in paragraph 1. to convert the PV for domestic sewage and effluent to probable BOC, COD and TOC values multiply by the following factors:

	Sewage	Effluent
Probable BOD	PV x 5	PV x 1,5
Probable COD	PV x 10	PV x 7
Probable TOC	PV x 3	PV x 2

In general there is a connection between the Turbidity and the BOD-value of settled sewage and efluent. The BOD can also be calculated from the result of the turbidity test usig the fomula:

$$\text{Probable BOD} = \frac{\text{Turbidity}}{2} + 5$$

BOD-values can be cross checked that way with the PV tests. Recommendation for Effluent is not more than 20 mg/l.

Kit contains:
3 x 100 ml shaker tube (*SVZdev100)*
Stirring rod *(SPstr1)*
Cleaning brush *(SPclb1)*
200 tablets Acidifying SE (*TbsHASE200)*
100 tablets Permanganate Value *(TbsPPMGNV100)*

Attention!
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WATER TREATMENT

TESTING METHODS

Electronic Meter FT15

pH 0.00 - 14.00
(0.0 - 50.0 °C)

- Ÿ 1 point manual calibration (pH)
- Ÿ Incl. 4 x 1.5 V batteries
- Ÿ In a dark blue plastic case
- Ÿ English manual

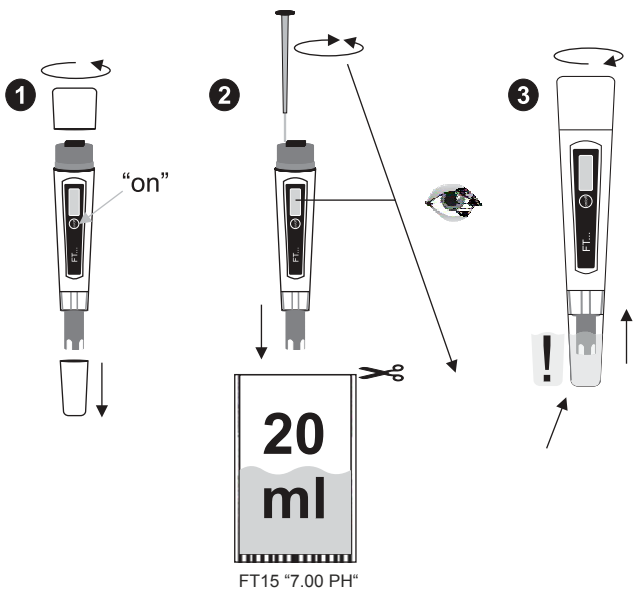
Operation:

Make sure the tester is calibrated to pH 7.00
1) Remove protective cap and switch meter on.
2) Immerse electrode in solution to be tested.
3) Stir gently and wait for the reading to stabilize.
4) Press "°C/°F" to switch between Celsius and Fahrenheit.
5) Read the result, than rinse the electrode with water.
6) Replace the protective cap and switch the meter off.
7) Make sure the electrode is kept wet all the time!

Buffer solution:

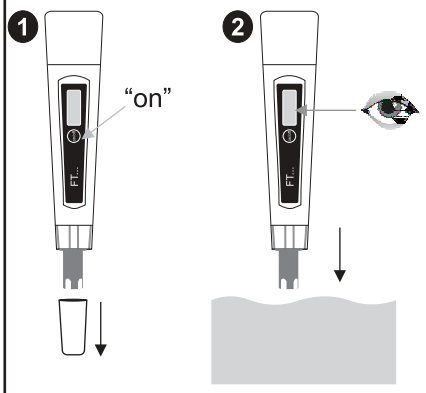
20 ml sachet / 7.00 pH / 1-time-use

Calibration:

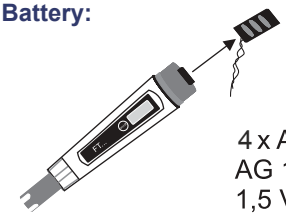


FT15 "7.00 PH"

Operation:



Battery:



4 x Alkaline
AG 13
1,5 V

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WATER TREATMENT

TESTING METHODS

Electronic Meter FT35

EC / Electronic conductivity: 0.00 - 19.99 mS/cm

- 1 point manual calibration
- Incl. 4 x 1.5 V batteries
- In a leather like bag with belt clip

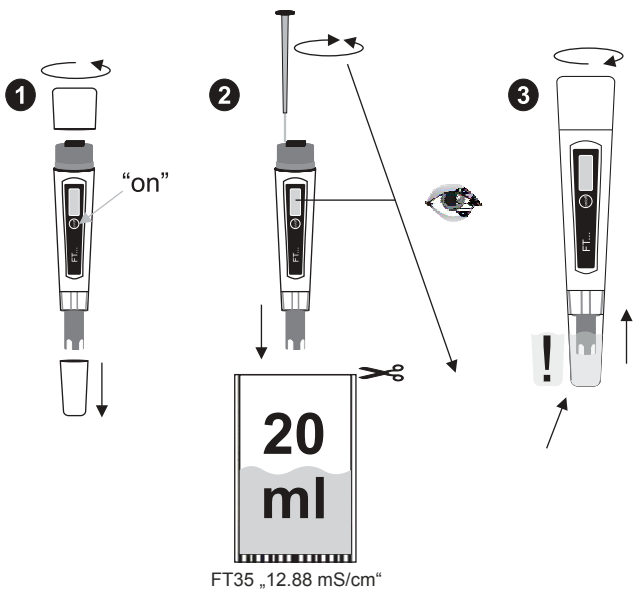
Operation:

Make sure the tester is calibrated to 12.88 mS/cm
1) Remove protective cap and switch meter on.
2) Immerse electrode in solution to be tested.
3) Stir gently and wait for the reading to stabilize.
4) Read the result, than rinse the electrode with water.
5) Replace the protective cap and switch the meter off.

Buffer solution:

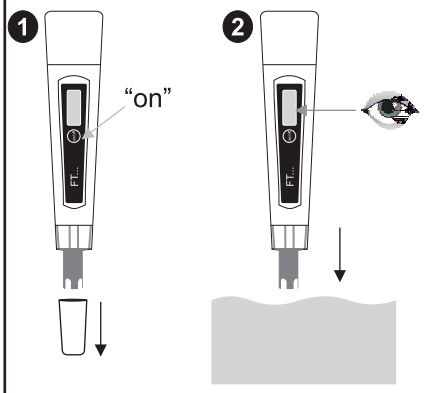
20 ml sachet / 12.88 mS/cm / 1-time-use

Calibration:

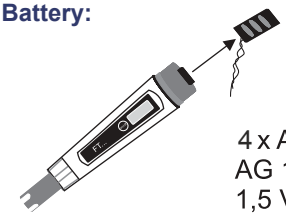


FT35 „12.88 mS/cm"

Operation:



Battery:



4 x Alkaline
AG 13
1,5 V

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WATER TREATMENT

TESTING METHODS

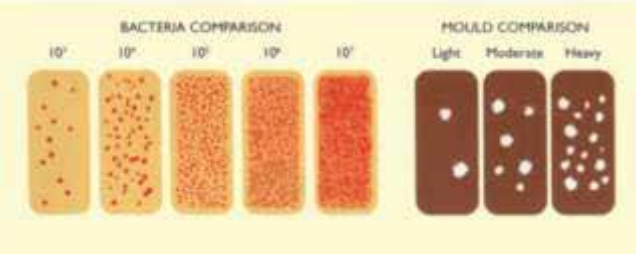
Dipslides

Samling & Testing Notes

Weekly monitoring of bacteria levels has been recommended by many legislators and professional authorities as a visual performance indicator to both system and treatment regime. This allows the user to gauge how effective a chemical or biocide product is in the particular application and a trend can be quickly established identifying changes and taking quick remedial action where required. It should be noted from the outset that Dipslides alone do not detect Legionella as a select micro-organism, however it is generally accepted that overall bacteria levels in excess of 10“ are considered able to support Legionella and obviously a serious risk.

The dipslide consists of a plastic paddle with culture media on each side, the tube keeps the media both moist & sterile until required. The product most suitable is a slide based on a standard nutrient agar with a red dye supplement added during production, this has the advantage of showing any viable colonies as red dots, easily identified and compared against the comparison chart.

IMPORTANT - Monitoring is not a substitute for a treatment regime, it is always best to seek the advice of a professional water treatment or environmental company who will supply a risk assessment together with the required treatment system. The advantage of your weekly monitoring program is you can see how well the system is performing and identify any problems in house in-between visits. Counts should never exceed 10‘ at any time.



1 - Prior to use please keep the slides in a cool place (not a fridge) at around 10 - 15°C.

Dipslides have a typical shelf life of 8 - 9 months. Once the dipslide is opened care must be taken not to touch the media or expose the media to the atmosphere in order to prevent false contamination.

2 - Ideally the sample should be taken in a clean container rinsed with the water to be tested.

You can also sample directly from the tower sump ensuring you do not touch any of the surfaces. Submerge the dipslide to the top of the culture media for around 2 seconds and then shake gently to remove excess fluid replacing in the tube.

3 - Place the slide into the Incubator, the correct temperature is 30°C for a period of 48 hours.

Incubation is vital for accurate results. The dipslides should only be incubated in an incubator. If you are mobile you must ensure you incubate the dipslides in a dual voltage incubator which will operate in a vehicle.

Attention!
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Dipslides

Application, Storage & Disposal

Storage
Dipslides should be stored in cool dry conditions, but not in a refrigerator - prior to despatch our stock is stored in a cold room at 10'C in order to prevent condensation and de-hydration of the agar and ensure Dipslides arrive in perfect condition.

Shelf Life
Dipslides have a typical use by date of 9 months dependent of manufacture cycle, they can be used after this date as long as no contamination or visible shrinkage shows on the agar surface - excess water in the bottom of the slide would indicate the storage temperature was too high.

Application
Dipslides can be used to monitor microbial growth wherever the potential may exceed 1000 (101) organisms per ml of sample fluid.

Industrial Waters: For detection of slime forming bacteria in cooling & industrial waters, storage tanks and for evaluating biocide perfomiance in treated systems.

Industrial Fluids: For detection of bacteria & moulds in metal-working fluids, paper processing waters, fuel tanks etc.

Environmental Hygiene: To monitor the surface contamination within domestic or institutional sites.

Leather Industry: For detection of spoilage organisms in hide and skin soaking liquors.

Product Safety - MSDS
Dipslides when new are non-hazardous.

Disposal of Used Slides
Contaminated slides should be sterilised before disposal by immersing in a disinfectant or by autoclave or incineration. After soaking in a disinfectant for 24 hours the dips can be disposed of in any normal non hazardous waste service.

Quality Control
Dipslides are manufactured in a clean environment and stored at constant temperature prior to despatch. All materials and each batch are traceable from source to our customer.

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WATER TREATMENT

TESTING METHODS

Bacteria Testing BactD006

Pseudomonas species and Coliforms

- 10 PDM / MAC Dipslide Tests
- For potable water, pools and spas
- Flexible paddle for effective surface contact

The PDM/MAC dipslide allows convenient enumeration of Pseudomonas spp. on the pale straw Pseudomonas differential medie (PDM) and enterobacteriaceae on the reddish/brown MacConkey side. PDM agar is a differential media that selects for Pseudomonas spp, while MacConkey agar is differential, all in one test for gram negative bile tolerant enterobacteriaceae.

SAMLLING: AIR
The sample should be taken by inverting the paddle and inserting in the vial. Let it sit for 15 minutes expodes to the air, the replace the paddle in the vial and sela tightly.

SAMPLING: FLUIDS
The sample should be taken by immersing both sides of the paddle into the fluid to be tested, it having first been removed from the sterile container. Excess sample should be gently shaken from the paddle before it is replaced in the container.

SAMLPLING: SURFACES
The sample should be taken by allowing direct contact between te agar surface and the test material. The paddle is flexible and can be bent at the upper end to allow both surfaces to come into intimate contact. Bacterial recovery rate is about 50% so that sweeping an area approximately twice that of the paddle will give a more accurate result.

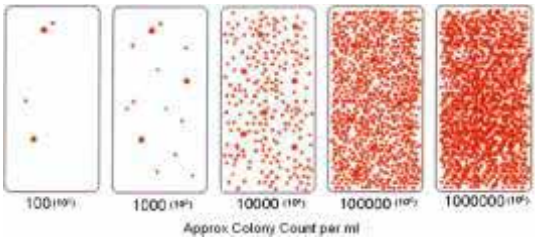
INCUBATION:
Incubate at 30° C for 24-48 hours, when full enumeration should be completed.

DISPOSAL
Used slides should be incinerated or autoclaved. Alternatively, immerse in a 10% bleach solution for 24 hours.

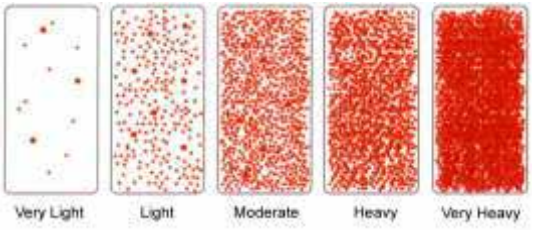
Organism	Colony Size (mm)	Shape & Surface	Colour	Comments
Pseudomonas Aeruginosa	Spreading	Glossy, Thin	Yellow-Green	PDM
P. fragi	1.0 - 3.0	CVEG	Grey	PDM
E. aecalis	1.0-2.0	CVEG	Red	MacConkey No. 3
E. coli	1.5-2.5	CVEG	Pink/ Red	MacConkey No.3
S. typhimurium	0.5-1.0	FED	Colourless	McConkey No. 3

CV.E.G = Convex entirely glossy, FED = Full entire dull

AEROBIC MICROBES - TVC Fluids

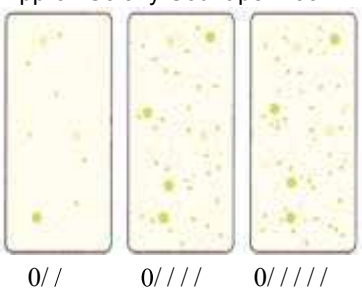


Surface

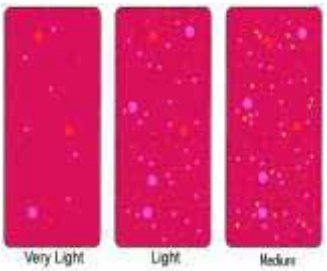


PDM AGAR:
Green/Blue: Pseudomonas aeruginosa
Buff/Grey colonies: Other Pseudomonas Species
Green/Blue and Buff/Grey: Total Pseudomonas

Approx Colony Count per 100 ml



MACCONKEY AGAR:
Colourless: Salmonella typhimurium / Proteus mirabilis / Pseudomonas aeruginosa
Pink: Aerobacter aerogenes
Pink/Red: Escherichia coli
Yellow/Green + Buff colonies: Total coliforms



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Incubator BactEDT057

- Ÿ Incubator for 2 dipslides
- Ÿ Preset to 35° C

The BactEDT057 incubator is perfect for all low-volume Dip-slide applications, plug in and go!

The incubator features upgraded functionality to make your small scale incubation solution even simpler. The BactEDT057 is our bespoke brand for situations requiring the small scale incubation of one to two tests in any 48 hour period.

What's more, the addition of low voltage heater control technology means the incubator can run via an optional in-car cigarette socket – giving you unparalleled versatility in situations where mobile/field testing may be required.

The BactEDT057 is the market leader in easy, low cost compliance solutions for industry standard TVC testing. Easy to use. Just plug in!

The BactEDT057 incubator is pre-set; all you have to do is allow 15-20 minutes to stabilize - then incubate.

A yellow heating indicator cuts in and out as heat is required.

Safe
The incubator runs from 12 volts DC, the mains stays at the adaptor/plug so reducing risk in situations where wet hands are handling samples. Full electronic protection against overload situations.

Versatile
The compact power pack feature Worldwide compatibility, plug options are for UK, Europe America & Australia, voltage selection between 110 and 240v is automatic. With the optional cigar lighter cable you can even take the incubator in a vehicle!

Accurate
The incubator features our BactEDT-Precision Electronic Control Technology and is pre-set during manufacture.

Despite its size and modest cost the incubator features a heat reservoir chassis so the temperature is held accurately.

Reliable
The BactEDT057 is fully automated. No moving parts to thermostat and a transistor switched element gives you simple, consistent and hassle-free incubation.

Specification & Size
Power supply Adaptor – 110-240v AC @ 300ma
Power supply – Incubator – 12 Volts DC @ 1 Amp
Temperature Control – MX Darlington switched solid state
Temperature – Pre-set to 35°C
Capacity – 1 or 2 Dip-slides
Case size – 15 x 8 x 9 cm
Outer carton (with adaptor) 16 x 16 x 16 cm
Total Weight – 1.1Kg Guarantee – 2 Years

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Wear protective gloves and safety gogles when performing any tests using corrosive, harmful or irritant reagents. Do not ingest.

PrimeLab 1.0 Photometer

Multi Test Photometer

Please refer to the manual given with the PrimeLab 1.0 Photometer

PrimeLab Turbidity Adapter

Turbidity Testing (NTU)

Please refer to the manual given with the PrimeLab Turbidity Adapter

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