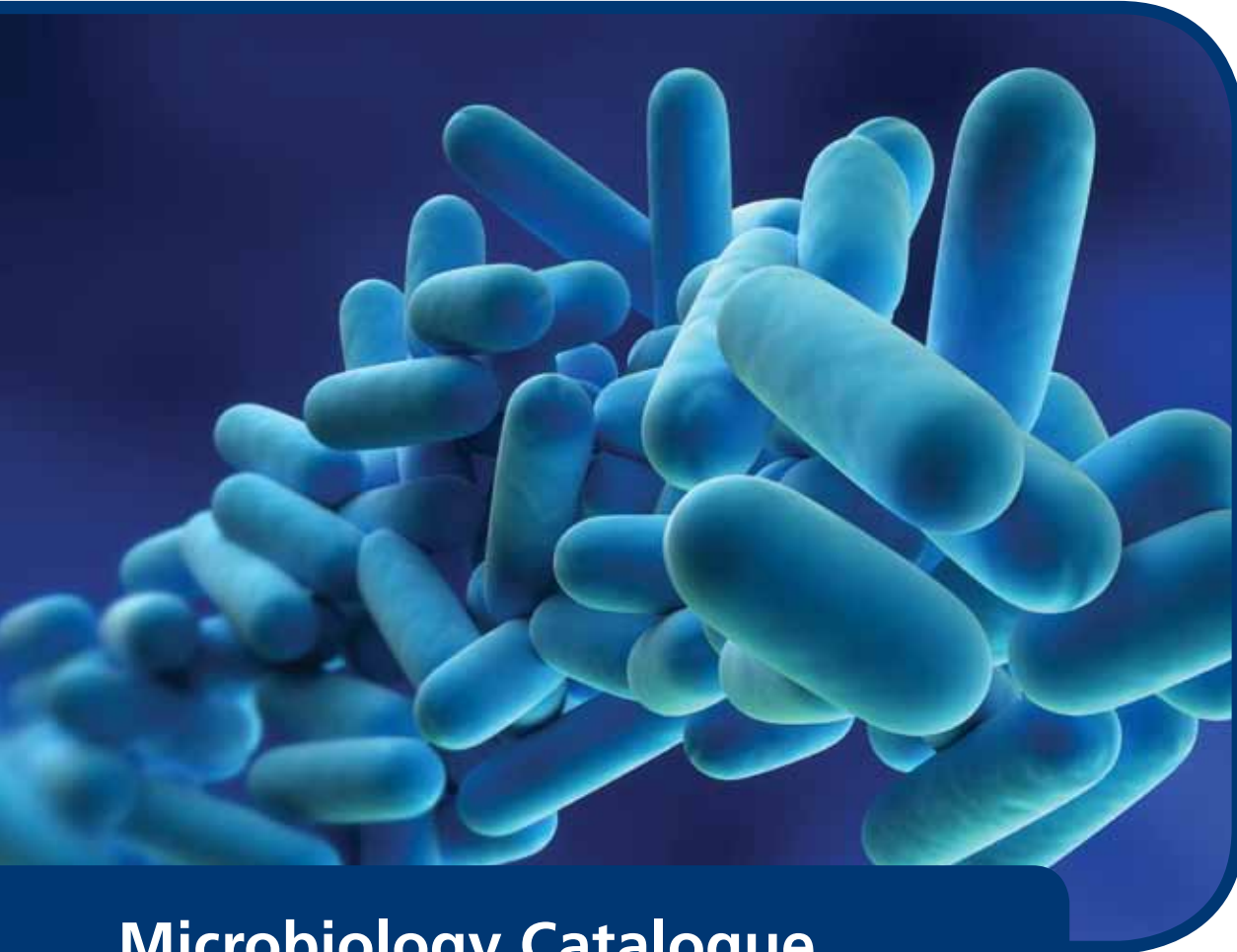


# Lovibond® Microbiological Testing

Tintometer® Group



## Microbiology Catalogue

[www.lovibond.com](http://www.lovibond.com)

Rank Lovibond Türkiye  
[www.rank.com.tr](http://www.rank.com.tr)



## Water Microbiology

Microorganisms – also known as microbes – of various types are found naturally in many water sources. They can be advantageous in some processes and are often necessary for the environmental synergy of ecosystems.

There are, however, other types of microbe that can cause disease in both the animal and plant kingdoms. When present in water systems, they can reduce plant and equipment life, potentially affecting the health and safety of operatives and members of the public.

These harmful microbes are introduced into the water through a variety of pathways. Often they are opportunistic pathogens that contribute to the microbial loading of the water and influence the subsequent contamination.

To combat this invasion, chemical and mechanical methods are employed with both systems requiring regular and effective monitoring to ensure they are combating the microbial activity.

The Lovibond® range of equipment and reagents for monitoring the chemical components of water are used worldwide in numerous applications including brewing and leisure, industrial and environmental waters.

## Lovibond® Range of Microbiological Testing Equipment

The diversity of the microbes that can affect the water systems is vast. In the majority of cases, the test to determine which microbial species is the causative agent for disease or infection is too complex to be performed on-site.

It is therefore accepted that indicator organisms can be used to monitor the microbiological trends within a water system: using them as the trigger for changing biocide dosing and further investigative work.

## The most commonly used indicator organism tests are:

### TVC (Total Viable Count)

To indicate the general number of microbes in the system

### *E.coli*/Coliforms

To indicate any faecal contamination

### Pseudomonas

To indicate any non-faecal contamination

The Lovibond® products listed in this brochure are intended for monitoring these microbes in the field and are suitable for use by both non-technical, semi-technical and professional members of the team.

## Agar – Dipslides

- Determine aerobic and anaerobic bacteria levels
- Early indication of bacteria proliferation
- Results in 24-72 hours
- Inexpensive
- Easy-to-Use
- Excellent for trend analysis

A full range of agar dipslides is available for semi-quantitative determination of aerobic and anaerobic bacteria populations in industrial and recreational waters.

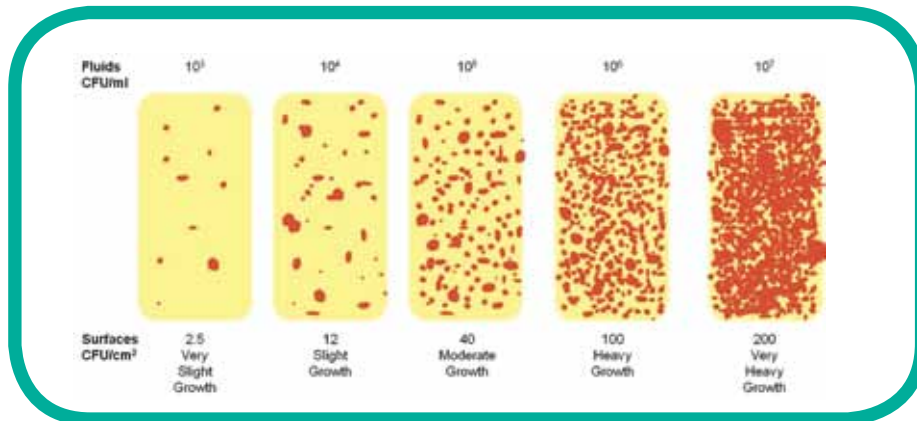


Dipslide accuracy is limited due to the small sample size, but if used correctly and incubated at a constant temperature using the Lovibond® dipslide incubator, they are excellent for trend analysis and can give an early indication of bacteria proliferation.

**Dipslides are supplied in a cardboard carton containing 10 slides.**

**Dipslides have a working shelf life of 6-9 months.**

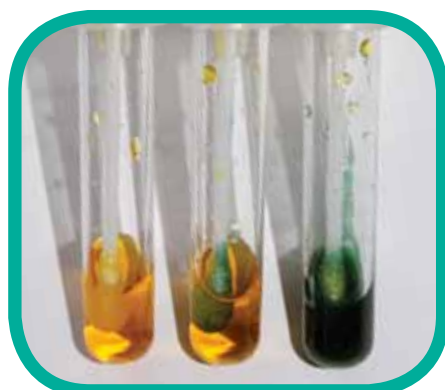
**Results are quantified by comparison to a standard density chart.**



Code	Dipslide	Application
<b>56B000110</b>	Sulphate Reducing	Sulphate reducing bacteria
<b>56B000210</b>	Denitrifying Bacteria	Nitrite Reducing bacteria
<b>56B000310</b>	TTC/BT2	Aerobic Bacteria
<b>56B000410</b>	COMBI/RBS	Aerobic bacteria and yeast/fungi (Rose Bengal for yeast/fungi)
<b>56B002610</b>	TP/PT	Aerobic Bacteria/ <i>Pseudomonas</i>

*Other slides available on request*

## Protein Test Swab



- Rapid results
- Storage at room temperature
- 18 month shelf-life
- Easy-to-Use
- <50µg sensitivity

The Clean Do Protein test swabs are a self contained test unit that provide rapid results. The test detects protein residues and is used as an indicator of surface cleanliness.

**Results are visual and are seen within 2 minutes.**

Code
<b>56B006990</b>
Description
Clean Do Protein test pk 100
Application
Surface Cleanliness



## Coliform/*E.coli* Test Kit

- Early identification of bacterial contamination
- Simple one step procedure
- *Coliforms* and *E.coli* in one test
- 100ml sample (regulatory reporting)
- Detects one CFU/100ml
- Test can be qualitative or quantitative
- 2 year shelf-life at room temperature

Clean water is essential for many parts of life including drinking, recreation, cooking and cleaning. It is therefore important to monitor the safety of that water.

The microbes that cause disease are often difficult to test for, so *Coliform* and *E.coli* are used as indicator organisms for general contamination and, in particular, faecal contamination.

For many types of water these bacterium should be present at zero Colony Forming Units (CFU) of *Coliforms* and *E.coli* per 100ml of water.

The Lovibond® system tests 100ml samples and indicates the presence of just one CFU/100ml. With the addition of the EC Blue Quant for MPN (Most Probable Number), the test can become quantitative if necessary.

The test is available either in pre-packed bottle form – where powder is loose in a 100ml bottle ready to use – or in powder pouches for ease of transportation.

A Mini Fluorescent lamp is required for the determination of *E.coli*. The EC Blue Quant is an optional extra, if quantification of the bacteria is required.

The Lovibond® system is a simple, reliable technique which enables the rapid, confirmed enumeration of both total *Coliforms* and pathogenic *E.coli*.

The Lovibond® DC 10 dipslide incubator is ideal for correct incubation of samples prior to reading, **see page 10** for information.



Code	Article	Application
<b>56B006590</b>	EC Blue 100P (100 Pouches)	<i>E.Coli</i> / <i>Coliform</i>
<b>56B006659</b>	EC Blue 100 (100ml x 80 bottles)	<i>E.Coli</i> / <i>Coliform</i>
<b>56B006701</b>	Mini fluorescent lamp	Required for <i>E.Coli</i> identification
<b>56B006801</b>	EC Blue Quant	Optional – required for MPN quantification

# ATP Meter (Sanitation Monitoring)

- Real-Time ATP Monitoring
- Quick, easy and accurate
- Monitor cleanliness in sds
- Measures levels of organic matter and micro-organisms
- Detects surface or water borne contamination

ATP is an accepted method of routine surface screening for organic matter and micro-organisms by the detection of adenosine triphosphate (ATP), a substance found in living cells.

When ATP contacts the firefly reagent luciferin luciferase, a reaction takes place that produces light. The ATP meter simply measures this light output. The higher the levels of organic matter and micro-organisms on a surface or in a water sample, the more ATP is present, and thus a greater intensity of light produced. The ability to quickly, easily and accurately monitor cleanliness can be a huge aid in the control of microbiological contamination. ATP technology can be used in a number of industrial applications as part of a systematic monitoring and control program.

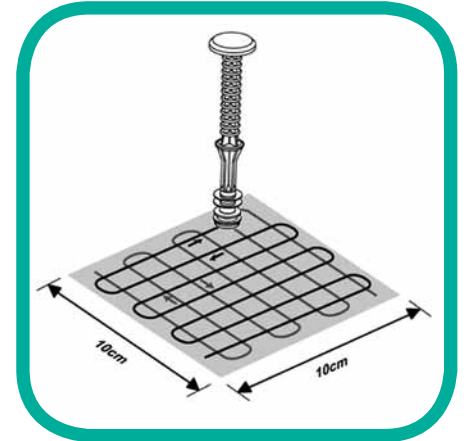
## Technical Features

- Intuitive symbols provide a universal interface
- Leading edge circuitry and enhanced silicon photo-diode
- LCD display of site name, number, group and test type
- User information selected and recorded with test results
- Up to 999 unique test sites can be accommodated
- Complete self-test at power-on
- Real-time random site selection
- USB interface for fast data transfer

## Windows® Compatible Software

AccuPoint comes with Data Manager Software that allows users to:

- Upload results to a PC
- Create and print trend analysis graphs
- Keep a record of sanitation effectiveness to verify SSOPs (Sanitation Standard Operating Procedures)
- Set pass/caution/fail levels
- Export data to spreadsheets



Flat Pad for Extensive Sampling of Area

**Code: 56B001001: ATP Meter**

Code	Article	Description
56B001190	Surface Sampler	Consistency is the key to a successful sanitation monitoring program. AccuPoint's Surface Sampler is the perfect choice for consistent sampling of most food contact surfaces, from flat food prep areas to all types of processing equipment.
56B001290	Access Sampler	AccuPoint's unique Access Sampler was created specifically for testing tight spaces, such as filler heads. The easy-to-use design provides consistently accurate results.
56B001390	Liquid Sampler	AccuPoint's Liquid Samplers feature precision engineered collection pads and reagents to make them the samplers of choice for accurately sampling liquid for the presence of ATP.  <b>Unique Sampler Design</b> The unique design of the AccuPoint sampler allows greater sample precision and consistency. Unlike traditional swabs, the sampler utilizes a large surface-area sample pad to extract ATP from the work surface.
56A012401	Filtration Pack	Filtration pack designed to differentiate between Free and Total ATP

## Legionella – Early Warning Indicative Test

- *Legionella* results within 25 minutes (excluding filtration step)
- Quick results and easy-to-use
- Different form of kits available for different applications and sensitivity
- 18 months shelf-life at room temperature

The Lovibond® *Legionella* system detects *Legionella pneumophilla* serogroup 1, the most common causative agent of Legionnaires disease in humans. Infection is via inhalation of aerosols containing the bacteria which causes a pneumonia-like disease that can prove fatal, especially in immuno suppressed individuals.

### Technical Features

The *Legionella* Field Test uses an immuno-chromatographic assay to detect the presence of cell surface antigens from *Legionella* bacteria in a sample. The presence of antigen causes the "Test Line" to turn red in colour. A "Control Line" is included which always turns red on successful completion of the test.

This test can provide a rapid indication of the presence of *Legionella pneumophila* serogroup 1, the most commonly recorded cause of Legionnaires Disease. This rapid test is a very useful addition to periodic laboratory culture tests for *Legionella*. It should not be used as



**Negative result** – only control line showing



**Positive result**

the sole method for assessing the presence of *Legionella*. If results with this rapid test indicate the presence of *Legionella*, then confirmation with a laboratory culture test is essential. For more information please visit our website.

<b>Bacteria detected</b>	<i>Legionella pneumophila</i> serogroup 1
<b>Detection method</b>	Lateral flow immunochromatographic assay
<b>Test volume</b>	100 µL, exact volume disposable pipette provided
<b>Specificity</b>	<p>Tested against a wide range of waterborne bacteria, including <i>Acinetobacter calcoaceticus</i>, <i>Aeromonas hydrophila</i> subsp. <i>Hydrophila</i>, <i>Bacillus subtilis</i>, <i>Burkholderia cepacia</i>, <i>Citrobacter freundii</i>, <i>Citrobacter koseri</i>, <i>Escherichia coli</i>, <i>Enterobacter cloacae</i>, <i>Klebsiella oxytoca</i>, <i>Pseudomonas aeruginosa</i>, <i>Pseudomonas fluorescens</i>, <i>Pseudomonas putida</i>, <i>Pseudomonas stutzeri</i>, <i>Ralstonia pickettii</i>, <i>Raoultella terrigena</i>, <i>Streptococcus pyrogenes</i>, <i>Yersinia ruckeri</i>. No cross reactions observed at concentrations &lt;10<sup>9</sup> CFU/sample.</p> <p><i>Staphylococcus aureus</i> has been observed to cross react with the test at concentrations &gt;10<sup>8</sup> CFU/sample. <i>Legionella pneumophila</i> serogroups 4 &amp; 7 cross reacts with the test at concentrations &gt;10<sup>9</sup> CFU/sample. The test does not react with any other <i>L. pneumophila</i> serogroup or <i>L.</i> species tested.</p>
<b>Sample parameters</b>	pH 5-10
<b>Sample temp</b>	15-45°C (59-113°F)
<b>Operating temp</b>	15-40°C (59-104°F)
<b>Operator time</b>	~ 1 minute
<b>Test development time</b>	25 minutes
<b>Shelf-life</b>	18 months from manufacture when stored at room temperature (<30°C) in original packaging
<b>Biocides</b>	<p>The product has been tested with a range of common biocides and biodispersants used in <i>Legionella</i> control, at their normal maximum operating concentration. Active ingredients tested include: glutaraldehyde, didecyl-dimethyl-ammonium chloride, isothazoles, dibromonitropropionamide, ionic and non-ionic surfactants.</p> <p>The test gives a false positive if used with polymeric biguanide.</p>

## Legionella – Early Warning Indicative Test (Continued)

Code	Article	Lower limit of detection	Description
<b>56B006001</b>	<i>Legionella</i> Field Test Kit	10 <sup>5</sup> CFU/L (100 CFU/mL)	Contains 10 test strips, 10 collection bags, and 10 dispensing pipettes.
<b>56B006101</b>	<i>Legionella</i> Industrial Test Kit	100 CFU/L (0.1 CFU/mL)	Contains 5 test strips, 5 recovery buffer solution in syringes, 5 hollow fibre filters, 1 sample point and 1 collection vessel.
<b>56B006201</b>	<i>Legionella</i> Domestic Kit	100 CFU/L (0.1 CFU/mL)	Contains the disposable items required to perform 5 tests – including filters and disposable pipettes. These tests are designed to be used in conjunction with the Field Filtration Kit.
<b>56B006301</b>	Field Filtration Kit	-	Vacuum pump and apparatus to filter 1L of water.
<b>56B006401</b>	<i>Legionella</i> Biofilm Kit	200 CFU per area swabbed	Contains all the items required to perform 5 tests – including swabs, recovery buffer and re-suspension tubes.



Code: 56B006001



Code: 56B006101



Code: 56B006401



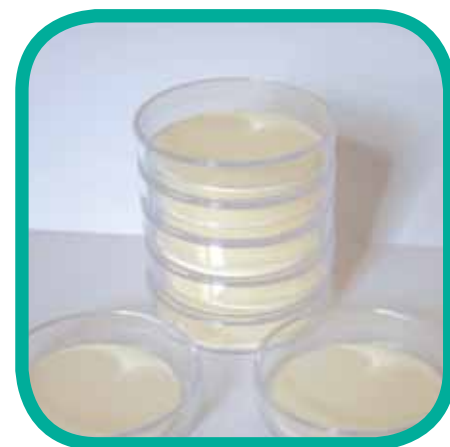
## Nutrient Pad System (NPS)

- Quantitative determination of micro-organism levels
- Results in 24-72 hours (media dependant)
- Up to 2 years shelf-life
- Storage at room temperature
- Selective nutrients for many species available
- Results displayed as CFU (Colony Forming Units)

Nutrient Pads are a sterile, dehydrated culture media available for immediate use. They have many advantages to traditional agar, not least that the shelf-life is increased and storage can be at normal room temperature.

Nutrient Pads must be rehydrated with sterile water prior to use and are then used in conjunction with a Membrane Filtration system. They provide counts from 0 CFU.

Two membrane filtration systems are available dependant on the automation required – see codes below.



Code	Media	Target Organism	Target Industries
56B002850	Colichrom (pk 50)	<i>E. coli</i> , <i>Coliforms</i>	Water, Waste Water
56B002950	Endo (pk 50)	<i>E. coli</i> , <i>Coliforms</i>	Water, Waste Water
56B003050	Lactose TTC (pk 50)	<i>E. coli</i> , <i>Coliforms</i>	Water, Waste Water
56B003150	M-FC (pk 50)	Faecal <i>E.coli</i> , <i>Coliforms</i>	Waste Water
56B003250	Azide (pk 50)	Enterococci	Water
56B003350	Cetrimide (pk 50)	<i>Pseudomonas aeruginosa</i>	Water
56B003450	M-TGE (pk 50)	Total Count	all
56B003550	Plate Count (pk 50)	Total Count	all
56B003650	Standard TTC (pk 50)	Total Count	all
56B003750	MRS (pk 50)	Lactobacilli	Soft Drink, Brewery
56B003850	Malt (pk 50)	Yeast & Mould	Soft Drink
56B003950	Orange Serum (pk 50)	Yeast & Mould	Soft Drink
56B004050	Schaufus-Pottinger (pk 50)	Yeast & Mould	Soft Drink
56B004150	m-Green (pk 50)	Yeast & Mould	Soft Drink
56B004250	Wort (pk 50)	Yeast & Mould	Soft Drink, Brewery

All the above NPS are supplied with 50 sterile membrane filters.

Code	Article
56B004350	Manual Membrane Filtration set includes: Manual vacuum pump, filtration cups sterile pk 12, flask and tubing
56B004412	Filtration cups sterile pk 12
56B007050	Sterile water 3.5ml ampoules pk 50
56B004501	Automated Membrane Filtration Working Place set includes: Self-sealing vacuum filter holder, 1L suction flask, Woulff's bottle including a manometer, dial display, ventilation valve and an efficient mini vacuum pump with vacuum tubing



Code: 56B004350



Code: 56B007050



Code: 56B004501

# Ready-To-Use Agar

- Quantitative determination of micro-organism levels
- Results in 24-72 hours (media dependant)
- Selective Agar for many species available.

The Lovibond® range of Ready-To-Use Agar employs traditional methods for microbiological determination. It is supplied, however, in a format to make use as easy as possible.

This system should be used in conjunction with a Membrane Filtration System.

Two Membrane Filtration Systems are available dependant on the automation required. Please see below for details.

The Ready-To-Use Agar has a maximum shelf-life of 6 months.



Code	Media	Target Organism
56B004625	Bile Aesculin Azide Agar (25 x20ml)	Enterococci
56B004725	Caseinpeptone Bile Agar	<i>E. coli</i>
56B004825	DRCM – Bouillon dehydr	Clostridia
56B004925	Endo – Agar	<i>E.coli</i> , <i>Coliform</i>
56B005025	Enterococci – selective Agar	Enterococci
56B005125	Yeast Extract Agar	Yeast, moulds
56B005225	Kanamycin – Aesculin-Azid-Agar	D-streptococci
56B005325	Lactose – TTC-Tergitol 7 Agar	<i>E.coli</i> , <i>Coliform</i>
56B005425	m-CP-Agar	<i>Cl. Perfringens</i> and spores
56B005525	MRS	Lactobacilli
56B005625	Nutrient Agar	Colony count
56B005725	Pseudomonas CN-Agar	<i>Ps. Aeruginosa</i>

Code	Article
56B004350	Manual Membrane Filtration Set includes: Manual vacuum pump, filtration cups sterile pk 12, tubing and flask
56B004412	Filtration cups sterile pk 12
56B005820	Petri dishes sterile pk 20
56B005950	Membrane filters pk 50
56B004501	Automated Membrane Filtration Working Place includes: self-sealing vacuum filter holder, 1L suction flask, Woulff's bottle including a manometer, dial display, ventilation valve and an efficient mini vacuum pump with vacuum tubing



Code: 56B004350



Code: 56B004501

# DI 10 Dipslide Incubator

**Code: 56B000701**

- Robust design
- Holds up to 12 dipslides or 10 quanti-discs
- Excellent temperature stability
- In-car operation
- Programmable incubation period setting

The Lovibond® DI 10 Incubator is designed for the reliable incubation of bacteriological slides, on-site, in a laboratory or even while mobile in a car or van.

National and European guidelines give practical advice on how to monitor, clean, test and ultimately control harmful *Legionella* bacteria in water systems.

Dipslides provide a crucial part in the testing program, but must be used correctly and regularly as part of a planned regime, week on week to be of any meaningful value.

The incubation period and the incubation temperature should be the same each time the test is performed so that bacteria growth is controlled and consistent each time the test is performed. This allows for week by week comparisons to be made and high counts easier to identify. Dipslides are usually incubated at 30°C for 48 hours, but this can vary depending upon the specific application.

The Lovibond® DI 10 Incubator, when used in conjunction with dipslides, enables effective microbiological monitoring of cooling water in accordance with the many European guidelines.

A complete range of 8 Lovibond® Thermostatic Cabinets is also available. For further details, view the Lovibond® General Catalogue or visit [www.lovibond.com](http://www.lovibond.com)



- Low Voltage (12V)
- Wide temperature range – Ambient +5 to 40°C (+/- 0.5°C )
- Uniform temperature (fan assisted)
- LCD Temperature display with up/down push button control.
- Rapid heating times for fast testing
- External status LEDs
- Universal (100 – 240V) via external power supply
- Includes in-car (12V) power adaptor



## Accessories:

Code	Description
<b>56B000801</b>	Dipslide holder
<b>56B000901</b>	Quanti-disc holder



Technical Specifications	
<b>Dimensions:</b>	(w)246 x (d)215 x (h)162 mm
<b>Weight:</b>	1.7Kg
<b>Operating Voltage:</b>	12V
<b>Input Voltage:</b>	12V/110V/240V (via external power supply)
<b>Display:</b>	1 x 16 bit Backlit LCD
<b>Capacity:</b>	12 dipslides/10 quanti-discs

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