



M I C R O B I O L O G I C A L

**CONTROL
SOLUTIONS**

WWW.IPEL.COM.BR



GLOBAL ACTION



COMPANY

Ipel is a Brazilian company that offers complete solutions for microbiological control for different market segments, with highly qualified professionals to add value to the products of our customers, working on respect for the environment and community.

VALUES

Satisfied Customers
Suppliers Partners
Employee appreciation
Responsible social action
Sustained Growth
Respect for the Environment
Continuous Improvement

MARKETS

Sugar and Alcohol	Polymers
Cosmetics	Cleaning Products
Leather	Sanitizers
Mining	Textile
Cutting Oil	Paints and Coatings
Pulp and Paper	Water Treatment
Petroleum - Drilling, Extraction and Processing	Formulators
Plastics	





BIOLAMINOTESTE

THE MICROBIOLOGICAL CONTROL

IN YOUR HANDS

The IPEL's microbiological control kits enable companies to conduct the self preventive monitoring of the microbial population in water, equipments, raw materials, finished products and processes, without the need to keep a complex laboratorial structure.

BIOLAMINOTESTE

This simple device was especially developed to enable companies to make their own evaluation of the microbiological contamination over surfaces, equipments, utensils, raw materials and finished products. The device contains two different specific culture media capable to detect and enumerate the most common microorganisms found in industrial processes. The Face 1 detects total Heterotrophic bacteria counts and the Face 2 detects Yeast and Fungi counts. Results can be observed in 2 or 3 days.

BIOLAMINOTESTE W

Device developed for the detection of coliform bacteria in water systems. The device contains two different culture media. The face 1 detects Heterotrophic Bacteria count and the face 2 detects Coliforms bacterias. (ex. Klebsiella, Escherichia). Coliform presence works as a microbiological indicator parameter to evaluate water quality.

BSR TESTE

Kit specially developed for the Sulphate Reducing Bacteria (SRB) detection. The darkening of the culture media or the appearance of black precipitate around the swab detects the presence of this bacteria. These are anaerobic bacterias and due to the diversity of species in this group, the microorganisms can contaminate several products and surfaces, such as raw materials, finished products, process and cooling water. These bacterias are present in large number, into the biofilms fixed on the equipments, pipes and utensils surfaces.



INDUSTRIAL SANITIZATION

IPEL BP 600

IPEL BP 600 has excellent advantages, the penetration power, acting on the planktonics and sessile microorganisms is one of them. The product also provides, lower reactive potential, higher materials compatibility, broad application spectrum, low toxicity level, easy handling, odorless in usual use concentrations and can be used in cationic or anionic systems. By using IPEL BP 600 for sanitizing resin columns of ion exchange, a significant improvement has been observed in the exchanging capability of the resin, reducing the frequency of resin regeneration. Furthermore, it can be mixed with water which facilitates its dilution before use and its removal during the rinsing process.

IPEL BP 610

Its balanced composition ensures effective control of microorganisms presents in the environment, such as aerobic and anaerobic bacteria (responsible for bad smell, loss of viscosity, corrosion, deterioration in general), fungi, algae and yeasts. The product is easily absorbed, acts on both planktonic as well as sessile micro-organisms, has lower reactive potential, higher material compatibility degree, acts within a wide pH range, is compatible with cationic and anionic systems, has a wide application spectrum, low toxicity level, easy handling, and is odorless in usual use concentrations. IPEL BP 610 is suitable for processes where the detergent action is required.

IPEL BP 630

Suitable to eliminate microorganisms in industrial systems due to its fast action and tensoative function. Compatible with cationic and non-ionic systems. Can be used as active ingredient in household disinfectant formulations.



IN CAN PRESERVATION



IPEL BP 09

Liquid bactericide/fungicide specially developed for use in alkaline systems. It can be used under pHs up to 11. It gives protection for the package head of the packaging.



IPEL BP 15

Bactericide/fungicide in aqueous solution, with wide spectrum and very effective against gram positive and gram negative bacteria. Its formulation is in accordance with the FDA and BGA for indirect contact with food. Recommended for use in applications where a VOC emission is needed. Can be used in decorative paints and coatings, polymeric aqueous dispersions, water treatment and many other applications.



IPEL BP 20

Liquid microbicide specifically developed for the wet state protection of aqueous alkaline systems. IPEL BP-20 has low toxicity and its formulation is in accordance with the FDA regulations. IPEL BP 20 can be used in extreme conditions such as high temperatures, amine presence and alkaline pHs.



IPEL BP 506

Microbicide solution with bactericide and yeast killing action. Its formulation provides fast kill and long term residual action, specially developed for the protection of aqueous dispersions of pigments and mineral slurries. Compatible with aqueous systems.



IPEL BP 507

Liquid microbicide in aqueous solution, with high spectrum, very effective against bacteria, fungi and yeasts. With an excellent cost/benefits relation, provides long lasting protection even at the head space of the package or the storage tank.



IPEL BP 509

Free VOC bactericide/fungicide. Recommended for the microbiological preservation of wet state formulations, such as paints, coatings and emulsion polymers.



IN CAN PRESERVATION

⊕ **IPEL BP 510**

Wide spectrum bactericide/fungicide. Its multi synergic composition provides excellent preservation for paints, coating formulations and slurries on the wet state. Stable under pHs from 3 to 10.

⊕ **IPEL BP 527**

Microbicide in aqueous solution, with wide spectrum, effective against bacterias, fungi and yeasts. Complete protection for in can formulation with excellent cost benefit. Compatible with aqueous systems.

⊕ **IPEL BP 558**

Aqueous dispersion based on Isothiazolinones and halogenated derivatives recommended for the preservation of waterborne polymer dispersions. Stable on alkaline systems and on temperatures below 80o C. EPEO free. Formaldehyde free. Effective against bacteria, yeasts and fungi providing complete protection for the wet state.

⊕ **IPEL BP 559**

Aqueous formulation based on Isothiazolinones and halogenated derivatives with excellent performance for the wet state protection of water based products such as paints, polymer dispersions and emulsions. IPEL BP 559 is free of formaldehyde and EPEO.

⊕ **IPEL BP 560**

Isothiazolinone based formulation, free of halogens, EPEOs and formaldehyde. Suitable for use on alkaline systems and temperatures below 90° C. Recommended for the wet state preservation of aqueous based formulations.

⊕ **IPEL BP 1052**

Aqueous formulation based on CIT/MIT stabilized with monovalent salts. IPEL BP 1052 is recommended for the preservation of polymer dispersions and for emulsion systems that destabilize in the presence of divalent salts.



DRY FILM PROTECTION

⊕ **IPEL FAP 412**

Fungicide / Algicide powder for application in powder coatings, grouts, mortars and other solid formulations that need action against algae and fungi in the dry film. It has an excellent resistance to leaching and wide spectrum of effectiveness.

⊕ **IPEL FAP 492**

Fungicide and algicide dispersion with high leaching resistance. Ideal for coatings that will be applied at very humid places.

⊕ **IPEL FAP 493**

Fungicide and algicide aqueous dispersion with high resistance to lixiviation. Recommended for coatings that will be applied on high humidity areas.

⊕ **IPEL FAP 771**

Algaecide and fungicide product, for dry film protection. Ideal for paints aqueous or solvent based, for outside application. Wide spectrum action.

⊕ **IPEL FAP 782**

Aqueous dispersion based on nitrogenated and Triazine derivatives which provides fungicide and algicide protection for dry film. Provides excellent resistance to lixiviation. Recommended for the dry film preservation of water based such as paints and textures for use on Coastal areas.

⊕ **IPEL FAP 783**

Aqueous dispersion based on Zinc derivatives, Isothiazolinones and nitrogenated derivatives with excellent algicide and fungicide action. With excellent resistance to the lixiviation, IPEL FAP 783 is highly recommended for the dry film preservation of indoor and outdoor water based coating formulations. It provides excellent dry film protection for paints used on coastal areas which are exposed to high risk of algae growth. Depending on its use concentration, can provide antimicrobial characteristics for the coating surface.

⊕ **IPEL FAP 791**

Water based emulsion that provides algicide and fungicide protection for the dry film. It has wide spectrum of action and is stable over a wide range of pH and temperatures. Recommended for the preservation of paints, textures and coating formulations.



DRY FILM PROTECTION



IPEL FBP 411 Zn

Powder product with fungicide action. Recommended for powder paints, grouting, joint cements and mortars. It presents excellent resistance to lixiviation; it is stable on alkaline systems and at high temperatures. Contains Zinc Oxide as vehicle. Can be used for preservation of liquid aqueous formulations.



IPEL FBP 413

Liquid fungicide with wide spectrum performance. Leaching resistant, ideal for the dry film protection of aqueous or solvent base coatings. Easily incorporated.



IPEL FBP 437

Wide spectrum liquid fungicide. Recommended for the dry film protection of paints, enamel, texture and any other kind of coatings.



IPEL FBP 458

Fungicide emulsion, based on Isothiazolinones and halogenated derivatives. It offers wide spectrum and is compatible with aqueous formulations and emulsions. Recommended for the preservation of water based coatings such as paints and textures. Stable at pH as high as 11.



IPEL FBP 480

Aqueous dispersion with fungicide action for the protection of dry films of decorative paints, plasters, textures, gypsum and other coatings. IPEL FBP 480 is a highly versatile product, with high resistance to the lixiviation and wide spectrum.



IPEL FBP 490

Aqueous dispersion with fungicide action. Dry film protection for decorative paints, textures, gypsum coatings and other kinds of coating formulations. High leaching resistance and wide spectrum of actuation.

INDUSTRIAL SANITIZATION

PRODUCT	PRESENTATION	INSTALATION DESINFECTIOIN	ACTION DETERGENT
IPEL BP 600	LIQUID	X	
IPEL BP 610	LIQUID	X	X
IPEL BP 630	LIQUID	X	X



IN CAN PRESERVATION

PRODUCT	PLASTER	PAINTS AND COATINGS	SLURRY	ALCALYNES SYSTEMS	EMULSION POLYMERS	SYSTEM
IPEL BP 09	X	X	X	X	X	AQUEOUS/ SOLVENT
IPEL BP 15	X	X			X	AQUEOUS
IPEL BP 20		X		X	X	AQUEOUS/ SOLVENT
IPEL BP 506	X	X	X			AQUEOUS/ SOLVENT
IPEL BP 507	X	X	X		X	AQUEOUS
IPEL BP 509	X	X	X		X	AQUEOUS
IPEL BP 510	X	X	X		X	AQUEOUS
IPEL BP 527	X	X	X			AQUEOUS
IPEL BP 558	X	X	X	X	X	AQUEOUS
IPEL BP 559	X	X	X		X	AQUEOUS
IPEL BP 560		X		X	X	AQUEOUS
IPEL BP 1052					X	AQUEOUS



DRY FILM PROTECTION

PRODUCT	FUNCTION	PRESENTATION	PAINT	TEXTURE	ENAMEL	POWDER PRODUCTS	SYSTEM
IPEL FAP 412	FUNGICIDE ALGAECIDE	POWDER				X	POWDER
IPEL FAP 492	FUNGICIDE ALGAECIDE	DISPERSION	X	X	X		AQUEOUS
IPEL FAP 493	FUNGICIDE ALGAECIDE	DISPERSION	X	X	X		AQUEOUS
IPEL FAP 771	FUNGICIDE ALGAECIDE	LIQUID	X	X	X		AQUEOUS/ SOLVENT
IPEL FAP 782	FUNGICIDE ALGAECIDE	LIQUID	X	X	X		AQUEOUS
IPEL FAP 783	FUNGICIDE ALGAECIDE	LIQUID	X	X	X		AQUEOUS
IPEL FAP 791	FUNGICIDE ALGAECIDE EMULSIFIED	LIQUID	X	X			AQUEOUS
IPEL FBP 411 Zn	FUNGICIDE	POWDER	X			X	POWDER
IPEL FBP 413	FUNGICIDE	LIQUID	X	X	X		AQUEOUS/ SOLVENT
IPEL FBP 437	FUNGICIDE	LIQUID	X	X	X		AQUEOUS/ SOLVENT
IPEL FBP 458	FUNGICIDE EMULSIFIED	LIQUID	X	X			AQUEOUS
IPEL FBP 480	FUNGICIDE	DISPERSION	X	X	X		AQUEOUS
IPEL FBP 490	FUNGICIDE	DISPERSION	X	X	X		AQUEOUS





SPECIAL PRODUCTS

Following its tradition in innovation, IPEL developed a special range of products that in addition to preservation, grants specific features, functions and adding value to our costumers products.



IPEL has developed OIus technology for microbiological preservation based on natural vegetable active ingredients. Through the combination of these natural ingredients we have reached a special feature to the final product in addition to, as a side effect, eliminates the need to use a conservant, adding value to the final product, aligned to the Green Products and Green Building trends.

- ⊕ **IPEL OIUS 1000** Bioflavonoid and essential oil 100% natural bactericide formulation.

- ⊕ **IPEL OIUS 2000** Terpene derivatives and essential oils 100% natural bactericide formulation.

- ⊕ **IPEL OIUS 3000** Terpene derivatives and bioflavonoids 100% natural bactericide formulation.





Antimicrobials

IPEL counts on a wide range of Antimicrobials based on several active ingredients, including the AgNano technology that uses silver nano particles. The Ipel Antimicrobials present an excellent performance, providing a bactericide action to the dry film, adding a new functionality to the surface. There is also options to algacide and fungicide action, providing complete protection to dry film avoiding use of other biocides.

+

IPEL FAP 444

Powder antimicrobial recommended for joint cements, grouting and powder paint. It has excellent action against algae, fungi and bacteria.

+

IPEL FAP 747

Formulation based on Dichloroctylisothiazolinone with algicidal, fungicidal and bactericidal action on dry film providing protection to coatings after application. Compatible with aqueous systems and solvent. Formulation with low odor, excellent resistance to leaching and wide spectrum of effectiveness.

+

IPEL FAP 776

Formulation with bactericide, fungicide, algacide and antifouling action, based on Isothiazolinone derivatives. Indicated to aqueous and solvent systems, including off-shore applications. Dosage levels are between 0,3 up to 1,5%.

+

IPEL FAP 778

Formulation with bactericide, fungicide, algacide and antifouling featured with an active release system through microcapsules technology. Indicated for coatings, especially for off-shore applications. Dosage levels are between 0,5 up to 2,0%.

+

IPEL FBP 440

Aqueous dispersion of Zinc Pyrithione. Effective against algae, fungi and bacteria providing protection to dry film, dispensing the use of others fungicides/algacides. Product with low VOC levels. Indicated to aqueous systems such as paints and others coatings. Dosage levels are between 0,5 up to 2,0%.

+

IPEL FBP 443

Aqueous dispersion based on Zinc derivatives. Effective against algae, fungi and bacteria providing protection to dry film with an excellent cost benefit. Product with low VOC levels. Indicated to aqueous systems such as paints and other coatings. Dosage levels are between 0,5 up to 2,0%.

+

IPEL FBP 447

Solvent dispersion based on Zinc derivatives. Effective against algae, fungi and bacteria, dispensing the use of others fungicides/algacides. Product with low VOC levels. Indicated to solvent systems such as paints, enamel, varnish and others coatings. Dosage levels are between 0,5 up to 2,0%.



SPECIAL PRODUCTS



Silver nano particles based technology developed to provide antibacterial action to the coating dry film, creating a new functionality to the surface, allowing classifying them as hygienic coatings.



AgNano 6010

Microbicide specially developed for the coatings surface protection against the degradation caused by fungi and yeasts, containing an inorganic active that provides antibacterial action for the surface. The inorganic active ingredient is based on a silver nano compound jointly developed with NANOX. Its action occurs by an inductive mechanism that provides an antibacterial action to the surface.



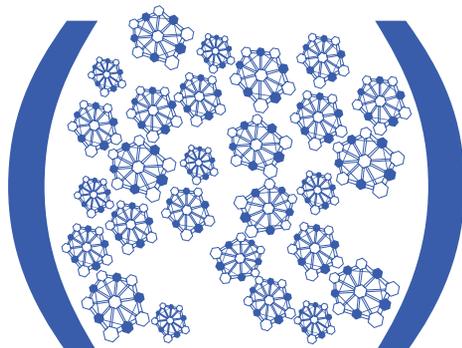
AgNano 6011

Microbicide with antibacterial action for the dry film. Formulation based on silver nano particles with a wide spectrum of action and excellent efficacy. Compatible on water and solvent based systems.



AgNano 6012

Microbicide for the complete protection of the coating dry film combining fungicide, algacide and antibacterial actions. Its multi component composition based on organic active ingredients and silver nano particles is compatible with water and solvent based systems forming an excellent option for complete protection of the "Premium" grades paints.





SPECIAL PRODUCTS



6000 Series REPELLENTS

With the objective to create new functionalities to paints and coatings, IPEL has developed a new range of additives with insect repellent action. The formulations containing this additives will offer a repellent surface that can help to minimize or inhibit the transmission of diseases providing an active character to coatings, aggregating value to your products.



IPEL 6000

Additive based on synthetic active that provides a repellent action against flying and ground insects. Use dosages ranges from 1.0 to 2.0%. Can be used on water or solvent based formulations.



IPEL 6001

Formulation with fungicide and repellent action, against crawling and flying insects, creating a new functionality to the surface. Dosage levels are between 1,0 up to 2,0%.



IPEL 6002

Based on synthetic and natural actives, this formulation counts with fungicide and repellent action, against crawling and flying insects, providing a new functionality to the surface. Dosage levels are between 1,0 up to 2,0%. Indicated to aqueous and solvent systems.



7000 Series ACARICIDE

IPEL research and development programs are oriented to develop alternatives that can offer to our customers possibilities to aggregate value to their products. The 7000 Series of miticide additives was developed to confer to the coatings surface an environmental protection characteristic, avoiding the development of mite populations on indoor environments reducing the risk of respiratory diseases development.



IPEL 7001

Multifunctional aqueous base additive, effective against algae, bactericide, fungicide and acaricide action to the dry film of coatings formulations. Indicated for preservation of dry film aqueous base coatings, adding anti-mite action and providing cleaner and healthier environments. Its exclusive composition associates derivatives of Zinc and halogenated esters.



IPEL 7002

Multifunctional additive that provides algacide, bactericide, fungicide and miticide action to the dry film of coatings formulations. Compatible with aqueous and solvent based systems such as varnishes and enamels. Its formulation based on isothiazolinones derivatives provides complete protection for the dry film and mite killing action for the coating surface adding an additional functionality.



MICROBIOLOGICAL CONTROL SOLUTIONS



Through Biotec, IPEL offers several types of Microbiological tests, as well as studies of methods and optimization of detection, isolation and eradication of industrial contaminants, given the different characteristics of each segment of work. This division was created in 2004 to attend a new trend on the market, providing services to customers or not customers of our products.

MICROBIOLOGICAL ANALYSIS WITH CORRECTIVE OR PREVENTIVE ACTION IN THE SEARCH FOR SOLUTIONS

Air and Surface Analyses
Tropical Chamber (fungi and algae)
Challenge Test (Dry Film, Bacterias, Fungi and Yeasts)
Minimal Inhibitory Concentration - MIC (bacteria and fungi)
Minimum Death Concentration - CMM (bacteria and fungi)
Counting of bacteria, fungi and yeasts (Bactometer)
Detection of microalgae
Halo of inhibition (fungi, algae, yeasts and bacterias)
Microscopy
Microbiological Profile
Materials biodeterioration test
Time kill (bacteria and fungi)
SBR detection test
Customized Tests and Methodologies

TECHNICAL TRAINING IN INDUSTRIAL MICROBIOLOGY

Training at IPEL lab facilities
Training at the customer facilities (in company)

TECHNICAL CONSULTANCY IN INDUSTRIAL MICROBIOLOGY

Development and implementation of protocols
Set up of Microbiological Labs
Critical points diagnosis
Troubleshooting of microbial contamination
GMP - Good Manufacturing Practices
GLP - Good Laboratory Practices

MORE THAN PRODUCTS, SERVICES

Ipel offers services and programs that complement the protection given by our products. The implementation of these programs provides to IPEL customers an excellent opportunity to optimize the biocide consumption, the operational safety, accuracy and productivity resulting cost reduction.



Safety Training Program

Training program aimed at clarify and teach the best ways to manipulate and act with any emergency during biocides handling. Covers aspects of health, safety and environment protection, to enable the handling and use of products safe and responsible.



Automated Biocide Dosing Systems

Biocide Dosing Systems Automation - Evaluation and partnership on development of projects and systems for the automation of biocides dosing systems. This program aims to improve the operational safety, accuracy and productivity. Projects are customized according to each case. Distinct levels of projects, from a simple container system to total dosing automation systems are available.



Total Management of Microbiological Quality

Modular program which may include monitoring of manufacturing processes, finished products, raw materials, detection of critical points and definition of plant hygiene programs, among others. Excellent tool for preventive control of microbiological contamination.



Product Customization Program

Customization of products for costumers specific needs, in order to obtain the best possible solution in microbiological preservation. This service comes to answer the specific needs of new applications or special use conditions and restrictions that are not provided by regular range of products. This work may be performed under contract of secrecy and exclusivity of use.



IPEL Professional Sanitizing Program

Through this program IPEL offers complete support in cleaning and sanitation for industrial plants. All the procedures are followed and oriented by a technical team of chemists and biologists that with the use of specific equipment and the application of sanitation products, provides the best sanitation performance for industrial tanks, valves and pipelines. This program assures to our customers a sustainable and efficient sanitation, avoiding wastes and assuring its high efficacy through the use of onsite specific microbiological tests.

MICROMOR

P R O J E C T

Using the MICROMOR FAMILY concept, IPEL wishes to communicate to the final user, on an easy and funny way, Microbiology notions and the importance of the microbiological quality of the products we use daily.

The Project also has a website **www.micromor.com** where the community can find information, curiosity and games.

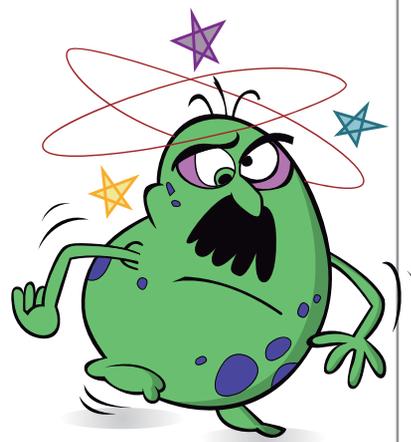


MICROMOR

F A M Í L Y

MICROMOR

- Patriarch and leader of the family. Grouty and peevish.
- Dangerous guy, damages surfaces and liquid products.
- Arrested by the IPEL special biocides.



JUNINHO ENCRENCA

- Juninho is the kid of the Family. He likes to play hide and seek in the pipes and connections.
- Like all teenagers, he likes to stay in groups and his gang is known as Biofilm.
- Restrained by IPEL sanitizers and SISPI program.

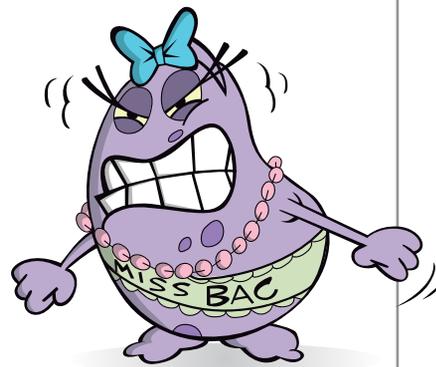


MICROMOR

F A M I L Y

MISSBAC

- Highly vain, she is the father's sweetheart. She spends her time among paints and emulsions, creams and therapeutic baths.
- Highly contaminant, she is generally found in a liquid medium, easily identified by her bad odor.
- Restrained by the wet state protection microbicides from IPEL.



SR. DANOUSSE

- Confident and stubborn, he is always in trouble. He plans to established his family on a surface.
- Dangerous guy, always found anchored over surfaces. Easily identified by the darkening of surfaces and dry films.
- Arrested by the dry film microbicides from IPEL.

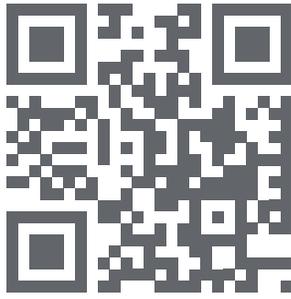


ÁCARO CÃO

- Micromor Family pet.
- Fears IPEL products.
- Restrained by the 7000 series of Anti-Mite Additives from IPEL.



Meet the characters of
MICROMOR FAMILY.



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