

Hair Care



Color Cosmetics



Sun Care



Skin Care



Pure Formulating JEENius

NEW! GLOBALLY APPROVED!

PRESERVATIVE SYSTEMS

JEEN International recognized as a leader in preservative technology offers 5 new paraben-free, formaldehyde-free globally accepted preservative blends for effective broad spectrum preservation against bacteria, mold and yeast. These new products are designed for all cosmetic applications that require global acceptance.

JEECIDE® CAP-1

Caprylyl Glycol / Phenoxyethanol / Hexylene Glycol / Iodopropynyl Butylcarbamate

JEECIDE® CAP-2

Caprylyl Glycol / Phenoxyethanol / Hexylene Glycol

JEECIDE® CAP-3

Caprylyl Glycol / Phenoxyethanol / Propylene Glycol / Iodopropynyl Butylcarbamate

JEECIDE® CAP-4

Caprylyl Glycol / Phenoxyethanol

JEECIDE® CAP-5

Phenoxyethanol / Caprylyl Glycol / Potassium Sorbate / Water / Hexylene Glycol

JEEN INTERNATIONAL
CORPORATION

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You Can Count On US!

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JEECIDE CAP-1

Technical Data Sheet

INCI Name:

Hexylene Glycol, Caprylyl Glycol, Iodopropynyl Butylcarbamate, Phenoxyethanol

CAS Numbers:

107-41-5, 1117-86-8, 55406-53-6, 122-99-6

JEEN International has recognized the need for a synergistic blend of conventional and non-conventional preservative ingredients that inhibit microbial growth. Jeecide CAP-1 is a unique easy-to-use clear liquid preservative that is:

- Paraben-free
- Formaldehyde-free
- Broad spectrum – effective against bacteria, yeast and mold
- Active over a wide pH range (3-10)
- Compatible with anionic, cationic and non-ionic surfactants and emulsifiers
- Toxicologically safe for use
- Equally suitable for use in both rinse-off and leave-on products
- Effective in difficult to preserve Water/Silicone emulsions
- Approved for use in the US and EU. Restricted in Japan

pH Stability:

Stable in the usual operating range of 3-10 which is typical for most personal care products.

Light Stability:

Jeecide CAP-1 is light sensitive and should always be stored in an opaque container.

Recommended Use Level:

Jeecide CAP-1 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of Jeecide CAP-1 to ensure proper preservation.

Method of Addition:

It is suggested not to add this blend to a product at a temperature exceeding 45 - 50°C. For emulsion products, because of the excellent compatibility of this blend with most ingredients, incorporation of it during the cool-down phase of processing is preferred. . It is soluble or dispersible in most non-polar materials. Jeecide CAP-1 is not water soluble however for highly aqueous systems, the addition of a co-solvent, coupling agent or surfactant (eg. Polysorbate 20) in a 1:1 ratio will make it water soluble to obtain a clear system.



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Technical Data Sheet continued....

Solubility Data:

Ingredient	Compatibility
Mineral Oil	D
Cyclomethicone	IS
Dimethicone 200/100 cst.	D
Caprylic/Capric Triglycerides	S
Water	D
Propylene Glycol	S
Ethanol 190 Proof	S
Isododecane	S
C12-15 Alkyl Benzoate	S
Isopropyl Myristate	S
Butylene Glycol	S
Phenyltrimethicone	S

D: Dispersible

IS: Insoluble

S: Soluble

Recommended Use Level:

Jeecide CAP-1 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of Jeecide CAP-1 to ensure proper preservation.

Microbiological Activity:

Jeecide CAP-1 is effective against both gram-positive and gram-negative bacteria, yeast and molds.

Product Specifications:

Appearance: Clear liquid
Odor: Slight, characteristic
Specific Gravity: 0.967 – 1.016
% Water (KF): 1 MAX

Regulatory: Approved for use in the US and the EU. Not acceptable for use in Japan.



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JEECID E CAP-2

Technical Data Sheet

INCI Name:

Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol

CAS Numbers:

1117-86-8, 122-99-6, 107-41-5

EINECS Numbers:

214-252-7, 204-589-7, 203-489-0

JEEN International has recognized the need for a synergistic blend of conventional and non-conventional preservative ingredients that inhibit microbial growth. JEECID E CAP-2 is a unique easy-to-use clear liquid preservative that is:

- Paraben-free
- Formaldehyde-free
- Broad spectrum activity – effective against bacteria, yeast and mold
- Active over a wide pH range (3-10)
- Compatible with anionic, cationic and non-ionic surfactants and emulsifiers
- Toxicologically safe for use
- Equally suitable for use in both rinse-off and leave-on products
- Effective in difficult to preserve Water/Silicone emulsions
- Approved for Global use.

pH Stability:

Stable in the usual operating range of 3-10 which is typical for most personal care products.

Light Stability:

JEECID E CAP-2 is light sensitive and should always be stored in an opaque container.

Recommended Use Level:

JEECID E CAP-2 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of JEECID E CAP-2 to ensure proper preservation.

Method of Addition:

It is suggested not to add this blend to a product at a temperature exceeding 70 - 75°C for extended time periods. For emulsion products, because of the excellent compatibility of this blend with most ingredients, incorporation of it during the cool-down phase of processing is preferred. . It is soluble or dispersible in most non-polar materials. JEECID E CAP-2 is not water soluble however for highly aqueous systems, the addition of a co-solvent, coupling agent or surfactant (eg. Polysorbate 20) in a 1:1 ratio will make it water soluble to obtain a clear system.



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Technical Data Sheet continued....JEECIDE CAP-2

Solubility Data:

Ingredient	Compatibility
Mineral Oil	D
Cyclomethicone	IS
Dimethicone 200/100 cst.	D
Caprylic/Capric Triglycerides	S
Water	D
Propylene Glycol	S
Ethanol 190 Proof	S
Isododecane	S
C12-15 Alkyl Benzoate	S
Isopropyl Myristate	S
Butylene Glycol	S
Phenyltrimethicone	S

D: Dispersible

IS: Insoluble

S: Soluble

Recommended Use Level:

JEECIDE CAP-2 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of JEECIDE CAP-2 to ensure proper preservation.

Microbiological Activity:

JEECIDE CAP-2 is effective against both gram-positive and gram-negative bacteria, yeast and molds.



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Technical Data Sheet continued....JEECIDe CAP-2

Minimum Inhibitory Concentration (MIC)

- Objective:** Determine activity of JEECIDe CAP-2 to Minimum Inhibitory Concentration (MIC) broth tests.
- Procedure:** A standard microtiter plate MIC test was conducted in Tryptic Soy Broth (bacteria) Sabouraud Dextrose Broth (yeast and molds).
- Results:** As shown in Table 1, JEECIDe CAP-2 is very effective at low concentrations against gram negative and positive bacteria and effective against yeasts and molds.

Table 1.

Minimum Inhibitory Concentrations

Organism	ATCC #	JEECIDe CAP-2
Gram-Negative bacteria		
Burkholderia cepacia	25416	1250
Escherichia coli	8739	625-1250
Enterobacter gergoviae	33028	5000
Enterobacter aerogenes	13048	1250-2500
Flavobacterium odoratum	NCIB 13294	1250
Klebsiella pneumoniae	4352	625
Proteus mirabilis	9240	1250
Pseudomonas aeruginosa	9027	2500-5000
Gram-positive bacteria		
Staphylococcus aureus	6538	625
Staphylococcus epidermidis	12228	625
Yeast		
Candida albicans	10231	313
Saccharomyces cerevisiae	7752	<78
Mold		
Aspergillus niger	9642	<78
Pencillium sp.	Cosmetic isolate	<78

Product Specifications:

- Appearance: Clear liquid
 Odor: Slight, characteristic
 Specific Gravity: 0.967 – 1.016
 % Water (KF): 1 MAX

Preservative Compositional Breakdown:

Phenoxyethanol: 30.0 – 40.0 %

Regulatory: Product approved for Global Use.

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Kill Test Data

JEECIDE CAP-2 has been tested using the tube testing method. Below are the results:

JEECIDE CAP-2 @ 1%

		<u>Results</u>
<u>Bacteria</u>	<u>Pool 1</u>	<u>3</u>
	<u>Pool 2</u>	<u>3</u>
	<u>Pool 3</u>	<u>3</u>
<u>Yeast</u>	<u>Pool 4</u>	<u>3</u>
<u>Mold</u>	<u>Pool 5</u>	<u>3</u>

Scale:

0 = No Kill

1 = Slight

2 = Moderate

3 = Kill

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All suggestions and data in this bulletin are based on information we believe to be reliable. They are offered in good faith. However, no guarantee is made or implied as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions on an experimental basis before adopting them on a commercial scale. Statements as to the use of our products are not to be construed as recommendations for their use in the infringement of any patents.



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JEECID E CAP-3

Technical Data Sheet

INCI Name:

Caprylyl Glycol, Phenoxyethanol, Propylene Glycol, Iodopropynyl Butylcarbamate

CAS Numbers:

1117-86-8, 122-99-6, 107-41-5, 57-55-6, 55406-53-6

JEEN International has recognized the need for a synergistic blend of conventional and non-conventional preservative ingredients that inhibit microbial growth. JEECID E CAP-3 is a unique easy-to-use clear liquid preservative that is:

- Paraben-free
- Formaldehyde-free
- Broad spectrum – effective against bacteria, yeast and mold
- Active over a wide pH range (3-10)
- Compatible with anionic, cationic and non-ionic surfactants and emulsifiers
- Toxicologically safe for use
- Equally suitable for use in both rinse-off and leave-on products
- Effective in difficult to preserve Water/Silicone emulsions
- Approved for use in the US and EU. Restricted in Japan

pH Stability:

Stable in the usual operating range of 3-10 which is typical for most personal care products.

Light Stability:

JEECID E CAP-3 is light sensitive and should always be stored in an opaque container.

Recommended Use Level:

JEECID E CAP-3 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of JEECID E CAP-3 to ensure proper preservation.

Method of Addition:

It is suggested not to add this blend to a product at a temperature exceeding 45 - 50°C. For emulsion products, because of the excellent compatibility of this blend with most ingredients, incorporation of it during the cool-down phase of processing is preferred. . It is soluble or dispersible in most non-polar materials. JEECID E CAP-3 is not water soluble however for highly aqueous systems, the addition of a co-solvent, coupling agent or surfactant (eg. Polysorbate 20) in a 1:1 ratio will make it water soluble to obtain a clear system.



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Technical Data Sheet continued....

Solubility Data:

Ingredient	Compatibility
Mineral Oil	D
Cyclomethicone	IS
Dimethicone 200/100 cst.	D
Caprylic/Capric Triglycerides	S
Water	D
Propylene Glycol	S
Ethanol 190 Proof	S
Isododecane	S
C12-15 Alkyl Benzoate	S
Isopropyl Myristate	S
Butylene Glycol	S
Phenyltrimethicone	S

D: Dispersible

IS: Insoluble

S: Soluble

Recommended Use Level:

JEECIDE CAP-3 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of JEECIDE CAP-3 to ensure proper preservation.

Microbiological Activity:

JEECIDE CAP-3 is effective against both gram-positive and gram-negative bacteria, yeast and molds.

Product Specifications:

Appearance: Clear liquid
Odor: Slight, characteristic
Specific Gravity: 0.967 – 1.016
% Water (KF): 1 MAX

Regulatory: Approved for use in the US and the EU. Not acceptable for use in Japan.



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JEECID E CAP-4

Technical Data Sheet

INCI Name:

Caprylyl Glycol, Phenoxyethanol

CAS Numbers:

1117-86-8, 122-99-6

JEECID E CAP-4 attributes include the following:

- Paraben-free
- Formaldehyde-free
- Highly effective anti-microbial
- Active over a wide pH range (3-10)
- Compatible with anionic, cationic and non-ionic surfactants and emulsifiers
- Toxicologically safe for use
- Equally suitable for use in both rinse-off and leave-on products
- Effective in difficult to preserve Water/Silicone emulsions
- Globally approved: US, EU and Japan.
- Can be used alone or in combination with other preservatives

pH Stability:

Stable in the usual operating range of 3 – 10 which is typical for most personal care products

Recommended Use Level:

JEECID E CAP-4 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of JEECID E CAP-4 to ensure proper preservation.

Method of Addition:

For emulsion products, JEECID E CAP-4 can be added directly to the water phase during pre or post-emulsification at or below 80 °C. It is soluble or dispersible in most non-polar materials. JEECID E CAP-4 is not water soluble however for highly aqueous systems, the addition of a co-solvent, coupling agent or surfactant (eg. Polysorbate 20) in a 1:1 ratio will make it water soluble to obtain a clear system.



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Technical Data Sheet continued....

Solubility Data:

Ingredient	Compatibility
Water	IS
Mineral Oil	D
Apricot Kernel Oil	S
Jobba Oil	S
Cyclomethicone	IS
PEG-8	S
Dimethicone 200/100 cst	D
Phenyltrimethicone	D
Glycerin	S
Propylene Glycol	S
Ethanol 190 Proof	S
C12-15 Alkyl Benzoate	S
Butylene Glycol	S
Polysorbate – 20	S
Polysorbate – 80	S
PEG-40 Hydrogenated Castor Oil	S

D: Dispersible
IS: Insoluble
S: Soluble

Recommended Use Level: 0.5 – 1.5%

Microbiological Activity:

JEECID CAP-4 is effective against both gram-positive and gram-negative bacteria, yeast and molds. In difficult to preserve systems, JEECID CAP-4 can be used in combination with other preservative agents. Examples of this are:

- 0.5 – 1.0% JEECID CAP-4 and 0.20% Potassium Sorbate or Sorbic Acid
- 0.5 – 1.0% JEECID CAP-4 and 0.05% Iodopropynyl Butylcarbamate
- 0.5 – 1.0% JEECID CAP-4 and 0.20% DMDM Hydantoin
- 0.5 – 1.0% JEECID CAP-4 and 0.10% Sodium Benzoate



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Product Specifications:

Test	Specifications
Appearance	Clear Liquid
Odor	Characteristic
Specific Gravity	1.0126 – 1.0217
% Moisture (KF)	1 % Maximum
% Phenoxyethanol (HPLC)	53 – 58
% Caprylyl Glycol	42 - 47

Regulatory: Approved for global use.

Storage Conditions:

JEECIDE CAP-4 can be stored in the original, unopened containers at ambient temperature for at least one year. When exposed to freezing temperatures, JEECIDE CAP-4 may cloud and slightly separate. The product should be mixed and gently warmed to 45 – 50 °C to obtain a clear mixture.

You Can Count On Us!

All suggestions and data in this bulletin are based on information we believe to be reliable. They are offered in good faith. However, no guarantee is made or implied as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions on an experimental basis before adopting them on a commercial scale. Statements as to the use of our products are not to be construed as recommendations for their use in the infringement of any patents



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JEECID CAP- 5

Technical Data Sheet

INCI Name: Phenoxyethanol & Caprylyl Glycol & Potassium Sorbate & Water & Hexylene Glycol

CAS Numbers: 1117-86-8, 122-99-6, 590-00-1, 7732-18-5, 107-41-5

EINECS Numbers: 214-254-7, 204-589-7, 246-376-1, 231-791-2, 203-489-0

JEEN International has recognized the need for a synergistic blend of conventional and non-conventional preservative ingredients that inhibit microbial growth. **JEECID CAP-5** is a unique easy-to-use clear liquid preservative that is:

- Paraben-free
- Formaldehyde-free
- Broad spectrum – effective against bacteria with enhanced protection against yeast and mold for difficult to preserve formulations.
- Active over an acidic pH range 3.0 – 6.5
- Compatible with anionic, cationic and non-ionic surfactants and emulsifiers
- Toxicologically safe for use
- Equally suitable for use in both rinse-off and leave-on products
- Effective in difficult to preserve Water/Silicone emulsions
- Approved for Global use.

pH Stability:

Stable in the operating range of 3.0 – 6.5.

Recommended Use Level:

JEECID CAP-5 can be added at 0.5 – 1.5% for effective anti-microbial efficacy. However, it is important that every formulation be challenge-tested to determine the correct level of **JEECID CAP-5** to ensure proper preservation.

Method of Addition:

It is suggested not to add this blend to a product at a temperature exceeding 70 - 75°C for extended time periods. For emulsion products, because of the excellent compatibility of this blend with most ingredients, incorporation of it during the cool-down phase of processing is preferred. It is soluble or dispersible in most non-polar materials. **JEECID CAP-5** is not water soluble however for highly aqueous systems, the addition of a co-solvent, coupling agent or surfactant (eg. Polysorbate 20) in a 1:1 ratio will make it water soluble to obtain a clear system.



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Technical Data Sheet continued....

Solubility Data:

Ingredient	Compatibility
Mineral Oil	D
Cyclomethicone	IS
Dimethicone 200/100 cst.	D
Caprylic/Capric Triglycerides	S
Water	D
Propylene Glycol	S
Ethanol 190 Proof	S
Isododecane	S
C12-15 Alkyl Benzoate	S
Isopropyl Myristate	S
Butylene Glycol	S
Phenyltrimethicone	S

D: Dispersible

IS: Insoluble

S: Soluble

Microbiological Activity:

JEECIDE CAP-5 is very effective against both gram-positive and gram-negative bacteria; and very effective against yeast and molds.

Microbiological Challenge Studies:

A study was conducted using 2 formulations: an oil-in-water emulsion and a water-in-oil emulsion using 0.5% and 1.0% JEECID E CAP-5. The protocol used was a modification of the CTFA Challenge Test using a 3 week re-challenge time period instead of a 4 week period. All samples were inoculated at the start of the study and sampled at 24 hours, 48 hours, 7 days, 14 days and 21 days. After 21 days, all samples were re-inoculated and subjected to a second challenge.

Oil-in-Water Emulsion

Ingredients	Control	0.5% JEECID E CAP-5	1.0% JEECID E CAP-5
Water	70.50	70.00	69.50
Glycerin	4.00	4.00	4.00
Apricot Kernel Oil	17.00	17.00	17.00
Cetearyl Alcohol & Ceteareth-20	4.50	4.50	4.50
Glyceryl Stearate & PEG-100 Stearate	4.00	4.00	4.00
JEECID E CAP-5	X	0.50	1.00

Test Organism	Unpreserved Control Initial Challenge			Unpreserved Control Re-challenge		
	24 hrs.	7 days	21 days	24 hrs.	7 days	21 days
S. aureus ATCC 6538	7.4×10^4	$<10^3$	<10	1.4×10^6	4.3×10^2	<10
P. aeruginosa ATCC 9027	2.5×10^4	1.6×10^7	1.9×10^7	1.5×10^7	2.0×10^7	1.9×10^7
K. pneumoniae ATCC 4352	1.6×10^5	7.6×10^4	4.0×10^3	1.1×10^6	1.6×10^6	4.0×10^5
C. albicans ATCC 10231	4.1×10^4	8.3×10^4	5.3×10^4	4.0×10^5	4.4×10^5	8.0×10^5
A. niger ATCC 9642 + Penicillium sp. isolate	3.4×10^4	2.5×10^4	1.4×10^4	5.1×10^4	3.0×10^4	2.9×10^4



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Test Organism	0.5% JEECIDE CAP-5 Initial Challenge			0.5% JEECIDE CAP-5 Re-challenge		
	24 hrs.	7 days	21 days	24 hrs.	7 days	21 days
S. aureus ATCC 6538	<10	<10	<10	<10	<10	<10
P. aeruginosa ATCC 9027	<10	<10	<10	<10	<10	<10
K. pneumoniae ATCC 4352	<10	<10	<10	<10	<10	<10
C. albicans ATCC 10231	1.2 x 10 ⁴	<10	<10	<10	<10	<10
A. niger ATCC 9642 + Penicillium sp. isolate	2.3 x 10 ³	<10	<10	<10	<10	<10

Test Organism	1% JEECIDE CAP-5 Initial Challenge			1% JEECIDE CAP-5 Re-challenge		
	24 hrs.	7 days	21 days	24 hrs.	7 days	21 days
S. aureus ATCC 6538	<10	<10	<10	<10	<10	<10
P. aeruginosa ATCC 9027	<10	<10	<10	<10	<10	<10
K. pneumoniae ATCC 4352	<10	<10	<10	<10	<10	<10
C. albicans ATCC 10231	<10	<10	<10	<10	<10	<10
A. niger ATCC 9642 + Penicillium sp. isolate	<10	<10	<10	<10	<10	<10

Water-In-Oil Emulsion

Ingredients	Control	0.5% JEECID CAP-5	1.0% JEECID CAP-5
Water	59.70	59.20	59.20
Glycerin	4.00	4.00	4.00
Butylene Glycol	3.00	3.00	3.00
Sodium Chloride	0.30	0.30	0.30
Cyclomethicone	7.00	7.00	7.00
Dimethicone	2.00	2.00	2.00
Isostearyl Palmitate	4.00	4.00	4.00
Isododecane & Dimethicone Crosspolymer-3	10.00	10.00	10.00
Cyclomethicone & PEG/PPG-18/18 Dimethicone	10.00	10.00	10.00
JEECID CAP-5	X	0.50	1.00

Test Organism	Unpreserved Control Initial Challenge			Unpreserved Control Re-challenge		
	24 hrs.	7 days	21 days	24 hrs.	7 days	21 days
S. aureus ATCC 6538	2.0×10^4	4.0×10^3	<10	9.5×10^2	<10	<10
P. aeruginosa ATCC 9027	4.4×10^4	7.1×10^4	7.2×10^3	3.6×10^4	3.5×10^4	1.1×10^5
K. pneumoniae ATCC 4352	1.1×10^5	1.1×10^5	<10	8.0×10^3	3.4×10^3	<10
C. albicans ATCC 10231	1.1×10^4	8.5×10^3	8.7×10^3	1.5×10^3	4.8×10^3	1.7×10^3
A. niger ATCC 9642 + Penicillium sp. isolate	2.0×10^3	1.2×10^4	2.2×10^3	2.0×10^3	1.7×10^3	2.2×10^3



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Test Organism	0.5% JEECIDe CAP-5 Initial Challenge			0.5% JEECIDe CAP-5 Re-challenge		
	24 hrs.	7 days	21 days	24 hrs.	7 days	21 days
S. aureus ATCC 6538	<10	<10	<10	<10	<10	<10
P. aeruginosa ATCC 9027	<10	<10	<10	<10	<10	<10
K. pneumoniae ATCC 4352	<10	<10	<10	<10	<10	<10
C. albicans ATCC 10231	1.1×10^2	<10	<10	<10	<10	<10
A. niger ATCC 9642 + Penicillium sp. isolate	3.0×10^1	<10	<10	<10	<10	<10

Test Organism	1% JEECIDe CAP-5 Initial Challenge			1% JEECIDe CAP-5 Re-challenge		
	24 hrs.	7 days	21 days	24 hrs.	7 days	21 days
S. aureus ATCC 6538	<10	<10	<10	<10	<10	<10
P. aeruginosa ATCC 9027	<10	<10	<10	<10	<10	<10
K. pneumoniae ATCC 4352	<10	<10	<10	<10	<10	<10
C. albicans ATCC 10231	<10	<10	<10	<10	<10	<10
A. niger ATCC 9642 + Penicillium sp. isolate	2.0×10^1	<10	<10	<10	<10	<10



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email: info@jeen.com , Website: www.jeen.com

Results:

Oil-in-Water

The **JEECID** CAP-5 at 1.0% killed all the challenge organisms within 24 hours after each challenge. At 0.5%, activity was slower versus yeast and mold than against bacteria after the first challenge, but molds were reduced to less than 10 per gram within 48 hours (results not shown). After the second challenge, 0.5% was effective against all organisms within 24 hours.

Water-in-Oil

The **JEECID** CAP-5 was effective against bacteria within 24 hours after each challenge. At 1.0%, the **JEECID** CAP-5 was faster against yeast and mold than at 0.5% after the first challenge but no organisms were detected 24 hours after the second challenge in the presence of 0.5% or 1.0% **JEECID** CAP-5.

Product Specifications:

Appearance @ 25 °C:	Clear to slightly hazy liquid*
Odor:	Slight, Characteristic
Specific Gravity:	1.015 – 1.065
% Water (KF):	12 Maximum

***Caution: Product may separate upon standing. Mix before use.**

Preservative Compositional Breakdown:

% Phenoxyethanol:	35 – 45%
% Potassium Sorbate:	8 – 15%

Regulatory: Product approved for Global Use.

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Kill Test Data

JEECIDE CAP-5 has been tested using the tube testing method. Below are the results:

JEECIDE CAP-5 @ 1%

		<u>Results</u>
<u>Bacteria</u>	<u>Pool 1</u>	<u>3</u>
	<u>Pool 2</u>	<u>3</u>
	<u>Pool 3</u>	<u>3</u>
<u>Yeast</u>	<u>Pool 4</u>	<u>3</u>
<u>Mold</u>	<u>Pool 5</u>	<u>3</u>

Scale:

- 0 = No Kill**
- 1 = Slight**
- 2 = Moderate**
- 3 = Kill**

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All suggestions and data in this bulletin are based on information we believe to be reliable. They are offered in good faith. However, no guarantee is made or implied as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions on an experimental basis before adopting them on a commercial scale. Statements as to the use of our products are not to be construed as recommendations for their use in the infringement of any patents.