2026

IBRG Method Handbook

PURPOSE AND SCOPE OF IBRG METHODS

IBRG MANAGEMENT TEAM



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Contents

IBRG DSP20-001.4 – Resistance of Paints and Coatings to Fungal Growth 3

IBRG DSP19-004.2 – Resistance of Paints and Coatings to Algal Growth 4

IBRG DSP25-001.01 – Algicidal Activity of Biocidal Washes 5

IBRG TEX13-005.1.05 – Antibacterial Properties of Textiles and Porous Materials 6

IBRG TA 22-004.1.01 – Quantitative Method for Evaluating Bactericidal Activity of Porous Absorbent Materials 7

IBRG FFG 16-001.02 – Basic Efficacy of Biocidal Active Substances in Aqueous-Based Metalworking Fluids 8

IBRG FFG 19-006.03 – Tier 1 Basic Efficacy Method for Biocidal Active Substances Used to Protect Aqueous-Based Cooling Fluids 9

IBRG FFG 19-007.04 – Efficacy Method for Biocidal Active Substances Used to Prevent Bacterial Biofilm Formation in Cooling Waters 10

IBRG FFG 19-008.03 – Basic Efficacy Method for Biocidal Active Substances Used as Slimicides in Paper Pulps 11

IBRG FFG 21-008.02 – Curative Agents against Aerobic Planktonic Bacterial Populations and Biofilms 12

IBRG FFG 21-009.02 – Efficacy of Products Used as Preservatives of Fluids Used in the Oil and Gas Extraction Industries – Anaerobic Bacteria Preservative 13

IBRG FFG 21-010.02 – Efficacy of Products Used as Preservatives of Fluids Used in the Oil and Gas Extraction Industries – Anaerobic Bacterial Biofilms Preservative 14

IBRG FFG 23-005.02 – Biocidal Active Substances Used to Protect Lithographic Fountain Solutions 15

IBRG FFG 25-003.01 – Method for Determining Efficacy of Biocides Against Heterotrophic Anaerobic Bacteria and Sulphate-Reducing Bacteria in Liquids 16

IBRG WPG22-006.02 – Polymer Dispersion Industrial Method 17

IBRG WPG23-005.02 – Paint Industrial Method 18

IBRG WPG23-006.02 – A Method for Evaluating the Curative Efficacy of Biocidal Substance to Bacterial Growth in Wet State Materials. 19

IBRG WPG25-007.01 – Method for Determining the Basic Efficacy of Biocidal Active Substances Used to Preserve Homecare Products 20

IBRG P16-001.05 – Method for Biocidal Active Substances Used to Preserve Aqueous-Based Paints 21

IBRG PDG16-001.05 – Method for Determining the Basic Efficacy of Biocidal Active Substances Used in Polymer Dispersions 22
IBRG PDG16-007.05 – Method for Determining the Basic Efficacy of Biocidal Active Substances Used to Preserve Aqueous Products 23

IBRG DSP20-001.4 – Resistance of Paints and Coatings to Fungal Growth

Method Number
IBRG DSP20-001.4

Method Name
Resistance of Paints and Coatings to Fungal Growth

Application Area
Evaluation of the resistance of paints, coatings, and similar products to fungal growth for regulatory submission and technical service. Can be modified for other applications

Organisms
Fungi (moulds, yeasts).

Matrix
Paints, coatings, plasters, renders, and similar products (interior and exterior surfaces).

Short Description
Samples are applied to a substrate (100 mm x 50 mm), cured, and inoculated with a mixed suspension of fungal spores and yeasts. Incubation is performed in humid chambers for up to 12 weeks. Fungal growth is rated visually on a scale of 0–5, comparing treated and untreated surfaces. Validity requires inoculum within specified limits, a growth rating > 4 on controls, and 6–12 weeks of incubation. Artificial weathering and ageing options are included; the key criterion is visual coverage of fungal growth.

Modifications
Modifications that could be used in this method – validated by IBRG

- Substrates larger than 100 mm x 50 mm can be employed provided that they fit into the humid chamber employed.

Source Note
IBRG DSP 20-001.4 (Determining the Resistance of Paints and Coatings to Fungal Growth).pdf, Version 4.0 (December 2025)

Keywords
fungal resistance, paints, coatings, biocide efficacy, visual rating, artificial weathering, regulatory, technical service

IBRG DSP19-004.2 – Resistance of Paints and Coatings to Algal Growth

Method Number
IBRG DSP19-004.2

Method Name
Resistance of Paints and Coatings to Algal Growth

Application Area
Evaluation of the resistance of paints and coatings to algal growth on exterior surfaces for regulatory submission and technical service.

Organisms
Algae and cyanobacteria.

Matrix
Paints, coatings, plasters, renders, and similar products (exterior surfaces).

Short Description
Samples are applied to a substrate (100 mm x 50 mm), cured, and inoculated with a mixed suspension of algae and cyanobacteria. Incubation is in a humid chamber under illumination for up to 12 weeks. Algal growth is rated visually on a scale of 0–5, comparing treated and untreated surfaces. Validity requires a growth rating > 4 on controls. Artificial weathering and ageing options are included; the key criterion is visual coverage of algal growth.

Modifications
Modifications that could be used in this method – validated by IBRG

- Substrates larger than 100 mm x 50 mm can be employed provided that they fit into the humid chamber employed.

Source Note
IBRG DSP 19-004.2 (Determining the Resistance of Paints and Coatings to Algal Growth).pdf, Version 2.0 (January 2026)

Keywords
algal resistance, paints, coatings, biocide efficacy, exterior, visual rating, regulatory, technical service

IBRG DSP25-001.01 – Algicidal Activity of Biocidal Washes

Method Number
IBRG DSP25-001.01

Method Name
Algicidal Activity of Biocidal Washes

Application Area
Evaluation of the algicidal activity of biocidal washes on surfaces for technical service and regulatory submission.

Organisms
Algae and cyanobacteria.

Matrix
Surfaces (either coated with paints/coatings without film preservative or an uncoated building material).

Short Description
Samples of substrate (100 mm x 100 mm) are inoculated with algae three times at weekly intervals for the first 3 weeks and then incubated for a further 3 weeks (6 weeks total incubation time) until a growth rating of ≥ 5 in achieved on sufficient samples, algal growth is rated visually on a scale of 0–6. After incubation, samples (with a growth rating of 5) are treated with biocidal wash or sterile water, neutralised, rinsed, and re-incubated. Visual decoloration and algal coverage are rated at defined time points. Efficacy is determined by comparing treated and control surfaces. Validity requires a growth rating of ≥ 5 on water-treated controls.

A neutraliser validation test is required to ensure that the activity of the biocide is halted at a specific time point.

Modifications
Modifications that could be used in this method – validated by IBRG

- Additional inoculation / treatment with ammonium nitrate or extended incubation period may be required for some substrates to achieve a growth rating of ≥ 5 prior to treatment. Equal growth rating on test panels prior to treatment is essential.

Source Note
IBRG DSP 25-001.01 (Method for Determining the Algicidal Efficacy of Biocidal Washes).pdf, Version 1 (February 2025)

Keywords
algicidal wash, algae, surface treatment, biocide efficacy, visual decoloration, repeated inoculation, regulatory, technical service

IBRG TEX13-005.1.05 – Antibacterial Properties of Textiles and Porous Materials

Method Number
IBRG TEX13-005.1.05

Method Name
Antibacterial Properties of Textiles and Porous Materials

Application Area
Determination of the antibacterial properties of textiles and porous materials for technical service and, if required, regulatory submission.

Organisms
Bacteria

Matrix
Textiles, porous materials, and articles (e.g., paper, foams, porous plastics).

Short Description
Samples are inoculated with defined bacterial suspensions and incubated. After a specified period, surviving bacteria are recovered using a validated neutraliser and quantified by measuring the number of colony forming units (CFU) present. Efficacy is determined by comparing populations on treated and untreated materials. Validity requires specified inoculum density and a minimum number of CFU on controls. The method is based on ISO 22196 and ISO 20743.

Source Note
IBRG TEX 13-005.1.05 (Tier1 Textile Method - Antibacterial Properties).pdf, Version 1.05 (June 2020)

Keywords
antibacterial, textiles, porous materials, biocide efficacy, CFU reduction, ISO 22196, ISO 20743, regulatory, technical service

IBRG TA 22-004.1.01 – Quantitative Method for Evaluating Bactericidal Activity of Porous Absorbent Materials

Method Number
IBRG TA 22-004.1.01

Method Name
Quantitative Method for Evaluating Bactericidal Activity of Porous Absorbent Materials

Application Area
Determination of the basic antibacterial properties of textiles and porous absorbent materials treated with a biocide for technical service and, if required, regulatory submission.

Organisms
Bacteria

Matrix
Textiles, porous absorbent materials and articles.

Short Description
Samples are inoculated with defined bacterial suspensions and incubated under controlled temperature and humidity. The volume of inoculum is adjusted to 90% of the material's moisture holding capacity. After incubation, surviving bacteria are recovered using a validated neutraliser and quantified by measuring the number of colony forming units (CFU) present. Efficacy is determined by comparing populations on treated and untreated materials. Validity requires specified inoculum density and minimum number of CFU on controls. The method adapts ISO 22196 and ISO 20743 by considering material absorbency.

Source Note
IBRG TA 22-004.1.01 (Quantitative Method for Evaluating Bactericidal Activity of Porous Absorbent Material).pdf, Version 1.01 (November 2022)

Keywords
antibacterial, porous absorbent materials, textiles, biocide efficacy, CFU reduction, ISO 22196, ISO 20743, regulatory, technical service

IBRG FFG 16-001.02 – Basic Efficacy of Biocidal Active Substances in Aqueous-Based Metalworking Fluids

Method Number
IBRG FFG 16-001.02

Method Name
Basic Efficacy of Biocidal Active Substances in Aqueous-Based Metalworking Fluids

Application Area
Determination of the basic efficacy of biocidal active substances for preservation of aqueous-based metalworking fluids for regulatory submission and technical service.

Organisms
Bacteria, yeast, filamentous fungi.

Matrix
Aqueous-based metalworking fluids (concentrates and diluted fluids).

Short Description
Samples are inoculated with mixed suspensions of either bacteria or yeast and filamentous fungi and incubated on multiple occasions. Bacterial and yeast populations are quantified by measuring the number of CFU present after neutralisation; filamentous fungal growth is assessed visually and, if needed, by measuring the dry weight of any biomass present or by microscopical examination. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and the use of validated neutraliser. The method includes multiple challenge cycles and correction for matrix effects.

Source Note
IBRG FFG 16-001.02 (Determining the basic efficacy of Biocidal Active Substances used in Aqueous-Based Metalworking Fluids).pdf, Version 2 (December 2024)

Keywords
metalworking fluids, biocide efficacy, bacteria, yeast, filamentous fungi, CFU, dry weight, regulatory, technical service

IBRG FFG 19-006.03 – Tier 1 Basic Efficacy Method for Biocidal Active Substances Used to Protect Aqueous-Based Cooling Fluids

Method Number
IBRG FFG 19/006.03

Method Name
Tier 1 Basic Efficacy Method for Biocidal Active Substances Used to Protect Aqueous-Based Cooling Fluids

Application Area
Determination of the basic efficacy of biocidal active substances for the preservation of aqueous-based cooling fluids for regulatory submission and technical service.

Organisms
Bacteria, yeast, filamentous fungi.

Matrix
Aqueous-based cooling fluids.

Short Description
Samples are inoculated with suspensions of either bacteria or yeast and filamentous fungi and incubated on multiple occasions. Bacterial and yeast populations are quantified by measuring the number of CFU present after neutralisation; filamentous fungal growth is assessed visually and, if needed, by measuring the dry weight of any biomass present or by microscopical examination. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and validated neutraliser. The method includes multiple challenge cycles and correction for matrix effects.

Source Note
IBRG FFG 19-006.03 (Tier 1 Basic Efficacy Method for Biocidal Active Substances Used to Protect Aqueous-Based Cooling Fluids).pdf, Version 3.0 (April 2025)

Keywords
cooling fluids, biocide efficacy, bacteria, yeast, filamentous fungi, CFU, dry weight, regulatory, technical service

IBRG FFG 19-007.04 – Efficacy Method for Biocidal Active Substances Used to Prevent Bacterial Biofilm Formation in Cooling Waters

Method Number
IBRG FFG 19-007.04

Method Name
Efficacy Method for Biocidal Active Substances Used to Prevent Bacterial Biofilm Formation in Cooling Waters

Application Area
Determination of the efficacy of biocidal active substances to prevent biofilm formation in aqueous-based cooling fluids for regulatory submission and technical service.

Organisms
Bacteria (biofilm-forming).

Matrix
Aqueous-based cooling fluids (model cooling fluid containing coupons for biofilm growth).

Short Description
Samples of a model cooling fluid containing coupons are inoculated with a mixed bacterial consortium and incubated. Planktonic and sessile (biofilm) populations are quantified at defined intervals. After incubation, the effect of the biocide is assessed by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, biofilm formation on coupons, and use of a validated neutraliser. The method includes statistical analysis of population changes and biofilm quantification.

Source Note
IBRG FFG 19-007.04 (Efficacy Method for Biocidal Active Substances Used to Prevent Bacterial Biofilm Formation in Cooling Waters).pdf, Version 4.0 (April 2025)

Keywords
biofilm, cooling water, biocide efficacy, bacteria, planktonic, sessile, coupons, regulatory, technical service

IBRG FFG 19-008.03 – Basic Efficacy Method for Biocidal Active Substances Used as Slimicides in Paper Pulps

Method Number
IBRG FFG 19-008.03

Method Name
Basic Efficacy Method for Biocidal Active Substances Used as Slimicides in Paper Pulps

Application Area
Determination of the basic efficacy of biocidal active substances for the prevention of slime (biofilm) formation in aqueous-based paper pulps for regulatory submission and technical service.

Organisms
Bacteria, yeasts, filamentous fungi.

Matrix
Aqueous-based paper pulps.

Short Description
Samples are inoculated with mixed suspensions of suspensions of either bacteria or yeast and filamentous fungi and incubated. Bacterial and yeast populations are quantified by CFU after neutralization; filamentous fungal growth is assessed visually and, if needed, by microscopical examination. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and validated neutraliser. The method includes assessment of slime (biofilm) formation by microscopy.

Source Note
IBRG FFG 19-008.03 (Basic Efficacy Method for Biocidal Active Substances Used as Slimicides in Paper Pulps).pdf, Version 3.0 (March 2025)

Keywords
paper pulp, slimicide, biofilm, biocide efficacy, bacteria, yeast, filamentous fungi, microscopy, regulatory, technical service

IBRG FFG 21-008.02 – Curative Agents against Aerobic Planktonic Bacterial Populations and Biofilms

Method Number
IBRG FFG 21-008.02

Method Name
Curative Agents against Aerobic Planktonic Bacterial Populations and Biofilms

Application Area
Determination of the curative efficacy of biocidal active substances for the treatment of planktonic and biofilm-forming bacteria in aqueous-based functional fluids for regulatory submission and technical service.

Organisms
Bacteria (planktonic and biofilm-forming).

Matrix
Aqueous-based functional fluids (model fluids with coupons for biofilm growth).

Short Description
Samples of model fluid containing coupons are inoculated with a mixed bacterial consortium and incubated to allow planktonic and biofilm growth. After establishment of growth of both planktonic populations and biofilms on the coupons, samples are treated with the biocidal agent and incubated further. Planktonic and sessile (biofilm) populations are quantified before and after treatment. Efficacy is determined as a statistically significant reduction in both populations compared to untreated controls. Validity requires specified inoculum density, significant growth in controls, and validated neutraliser.

Source Note
IBRG FFG 21-008.02 (Curative Agents against Aerobic Planktonic Bacterial Populations and Biofilms).pdf, Version 2.0 (January 2025)

Keywords
curative, biofilm, planktonic bacteria, functional fluids, biocide efficacy, coupons, statistical analysis, regulatory, technical service

IBRG FFG 21-009.02 – Efficacy of Products Used as Preservatives of Fluids Used in the Oil and Gas Extraction Industries – Anaerobic Bacteria Preservative

Method Number
IBRG FFG 21-009.02

Method Name
Efficacy of Products Used as Preservatives of Fluids Used in the Oil and Gas Extraction Industries – Anaerobic Bacteria Preservative

Application Area
Determination of the basic efficacy of biocidal active substances for the prevention of anaerobic bacterial growth in fluids used in oil and gas extraction (e.g., fracturing fluids, injection water, produced water) for regulatory submission and technical service.

Organisms
Anaerobic bacteria.

Matrix
Fluids used in oil and gas extraction (fracturing fluids, injection water, produced water).

Short Description
Samples of model fluid are inoculated with a mixed consortium of anaerobic bacteria and incubated under anoxic conditions. Microbial populations are determined at specified intervals using the Most Probable Number (MPN) technique and/or Total Viable Count (TVC) methods. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and validated neutraliser. The method includes statistical analysis of population changes.

Source Note
IBRG FFG 21-009.02 (Efficacy of products used as Preservatives of fluids used in the oil and gas extraction industries - Anaerobic Bacteria Preservative).pdf, Version 2 (February 2025)

Keywords
oil and gas, anaerobic bacteria, biocide efficacy, MPN, TVC, regulatory, technical service

IBRG FFG 21-010.02 – Efficacy of Products Used as Preservatives of Fluids Used in the Oil and Gas Extraction Industries – Anaerobic Bacterial Biofilms Preservative

Method Number
IBRG FFG 21-010.02

Method Name
Efficacy of Products Used as Preservatives of Fluids Used in the Oil and Gas Extraction Industries – Anaerobic Bacterial Biofilms Preservative

Application Area
Determination of the basic efficacy of biocidal active substances for the prevention of anaerobic bacterial biofilm formation in fluids used in oil and gas extraction (e.g., fracturing fluids, injection water, produced water) for regulatory submission and technical service.

Organism: Anaerobic bacteria (biofilm-forming).

Matrix
Fluids used in oil and gas extraction (fracturing fluids, injection water, produced water) with coupons for biofilm growth.

Short Description
Samples of model fluid containing coupons are inoculated with a mixed consortium of anaerobic bacteria and incubated under anoxic conditions. Planktonic and sessile (biofilm) populations are determined at specified intervals using the Most Probable Number (MPN) technique and/or Total Viable Count (TVC) methods. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, biofilm formation on coupons, and validated neutraliser. The method includes statistical analysis of population changes and biofilm quantification.

Source Note
IBRG FFG 21-010.02 (Efficacy of Products used as Preservatives of Fluids Used in the Oil and Gas Extraction Industries - Anaerobic Bacterial Biofilms Preservative).pdf, Version 2 (March 2025)

Keywords
oil and gas, anaerobic bacteria, biofilm, biocide efficacy, MPN, TVC, coupons, regulatory, technical service

IBRG FFG 23-005.02 – Biocidal Active Substances Used to Protect Lithographic Fountain Solutions

Method Number
IBRG FFG 23-005.02

Method Name
Biocidal Active Substances Used to Protect Lithographic Fountain Solutions

Application Area
Determination of the basic efficacy of biocidal active substances for the preservation of aqueous-based lithographic fountain solutions for regulatory submission and technical service. Organisms: Bacteria, yeasts, filamentous fungi.

Matrix
Aqueous-based lithographic fountain solutions.

Short Description
Samples are inoculated at weekly intervals with mixed consortia of either bacteria or yeasts, and filamentous fungi and incubated for 7 days. Bacterial and yeast populations are quantified by measuring the number of colony forming units (CFU) present after neutralisation; filamentous fungal growth is assessed visually and, if needed, by dry weight or microscopy. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and validated neutraliser. The method includes assessment of fungal biomass and statistical analysis.

Source Note
IBRG FFG 23-005.2 (Biocidal Active Substances Used to Protect Lithographic Fountain Solutions).pdf, Version 2.0 (January 2025)

Keywords
lithographic fountain solution, biocide efficacy, bacteria, yeast, filamentous fungi, CFU, dry weight, regulatory, technical service

IBRG FFG 25-003.01 – Method for Determining Efficacy of Biocides Against Heterotrophic Anaerobic Bacteria and Sulphate-Reducing Bacteria in Liquids

Method Number
IBRG FFG 25-003.01

Method Name
Method for Determining Efficacy of Biocides Against Heterotrophic Anaerobic Bacteria and Sulphate-Reducing Bacteria (SRB) in Liquids

Application Area
Determination of the efficacy of biocidal active substances to prevent the growth of anaerobic bacteria and SRBs in fluids used in oil and gas extraction (e.g. fracturing fluids, injection water, produced water).

Organism
Mixed consortium of facultative anaerobes and sulfate-reducing bacteria (SRBs)

Matrix
Oilfield-relevant liquids such as fracturing fluids, injection waters, produced waters, including artificial seawater as an example model matrix.

Short Description
Samples of model extraction fluids (with or without biocide) are inoculated with a mixed consortium of facultative anaerobes and sulfate-reducing bacteria (SRBs) and incubated under anoxic conditions. Microbial growth in both planktonic form and as biofilms on coupons is monitored over time.

Populations are determined using most probable method (MPN) and/or total viable count TVC methods, with SRBs assessed using selective techniques. Growth in untreated controls must be demonstrated.

Efficacy is determined by absence or a significant reduction of microbial growth in treated samples relative to untreated controls. The method simulates oilfield-relevant conditions, including realistic matrices (e.g. seawater-based systems) and mixed microbial communities.

Source Note
IBRG FFG 25-003.1 (Determining Efficacy of Biocides Against Heterotrophic Anaerobic Bacteria and Sulphate-Reducing Bacteria in Liquids).pdf, Version 1.0 (March 2026)

Keywords
oil and gas, SRB, anaerobic bacteria, seawater, produced water, fracturing fluid, MPN, TVC, biofilm, corrosion-related microbiology, biocide efficacy

IBRG WPG22-006.02 – Polymer Dispersion Industrial Method
Method Number

IBRG WPG22-006.02

Method Name
Polymer Dispersion Industrial Method

Application Area
Evaluation of the resistance of polymer dispersions to microbial growth for technical service (not for regulatory registration). Organisms: Bacteria, yeasts, filamentous fungi.

Matrix
Polymer dispersions (aqueous-based).

Short Description
Samples are inoculated repeatedly with mixed suspensions of bacteria, yeasts, and filamentous fungi and incubated. Microbial contamination is assessed after each challenge using streak-plate methods and visual rating. The method is intended for technical service laboratories and is not suitable for regulatory purposes. Validity requires significant growth in controls and use of appropriate streak-plate rating scales. Artificial aging and additional analytical options are included.

Source Note
IBRG WPG22-006.02 (Polymer Dispersion Industrial Method).docx, Version 2 (November 2025)

Keywords
polymer dispersion, industrial method, microbial resistance, biocide efficacy, streak plate, technical service

IBRG WPG23-005.02 – Paint Industrial Method

Method Number
IBRG WPG23-005.02

Method Name
Paint Industrial Method

Application Area
Evaluation of the resistance of paints to microbial growth in wet-state materials for technical service (not for regulatory registration). Organisms: Bacteria, yeasts, filamentous fungi.

Matrix
Aqueous-based paints.

Short Description
Samples are inoculated repeatedly with mixed suspensions of bacteria, yeasts, and filamentous fungi and incubated. Microbial contamination is assessed after each challenge using streak-plate methods and visual rating. The method is intended for technical service laboratories and is not suitable for regulatory registration. Validity requires significant growth in controls and the use of appropriate streak-plate rating scales. Artificial aging and additional analytical options are included.

Source Note
IBRG WPG23-005.02 (Paint Industrial Method).docx, Version 2 (November 2025)

Keywords
paint, industrial method, microbial resistance, biocide efficacy, streak plate, technical service

IBRG WPG23-006.02 – A Method for Evaluating the Curative Efficacy of Biocidal Substance to Bacterial Growth in Wet State Materials.

Method Number
IBRG WPG23-006.02

Method Name
A Method for Evaluating the Curative Efficacy of Biocidal Substance to Bacterial Growth in Wet State Materials.

Application Area
Evaluation of curative efficacy of biocides in aqueous-based products (e.g. polymer dispersions, formulated products) for regulatory or technical assessment.

Organisms
Bacteria

Matrix
Aqueous-based products (e.g. polymer dispersions, formulations).

Short Description
Samples are inoculated with a bacterial consortium and incubated to achieve significant growth. After establishment of bacterial growth, samples are treated with the biocide and incubated further.

Microbial populations are quantified by measuring the number of CFU g^{-1} present before treatment and after defined contact times (e.g. 24 h, 48 h, 7 days) following treatment. Efficacy is demonstrated by the observation of statistically significant reductions in viable counts compared to untreated controls.

The method represents a single challenge curative test and requires the demonstration of growth in the matrix prior to treatment, the use of validated neutralisation, and appropriate levels of inoculum.

Source Note
IBRG WPG23-006.02 (A Method for Evaluating the Curative Efficacy of Biocidal Substance to Bacterial Growth in Wet State Materials).docx, Version 2 (December 2025)

Keywords
wet-state, aqueous products, curative efficacy, CFU, bacterial reduction, polymer dispersions, biocide efficacy

IBRG WPG25-007.01 – Method for Determining the Basic Efficacy of Biocidal Active Substances Used to Preserve Homecare Products

Method Number
IBRG WPG25-007.01

Method Name
Method for Determining the Basic Efficacy of Biocidal Active Substances Used to Preserve Homecare Products

Application Area
Determination of the basic efficacy of biocidal active substances for in-can preservation of homecare products for regulatory submission and technical service.

Organisms
Bacteria, yeasts, filamentous fungi.

Matrix
Homecare products (e.g., surface cleaners, laundry detergents, conditioners).

Short Description
Samples containing the active substance are inoculated repeatedly with mixed suspensions of either bacteria or fungi and incubated. Microbial populations are enumerated at specified intervals after each challenge. Efficacy is determined by comparing the number of microorganisms in treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and use of a validated neutraliser. The method includes independent assessment for bacteria and fungi.

Source Note
IBRG WPG25-007.01 (Method for Determining the Basic Efficacy of Biocidal Active Substances used to Preserve Homecare Products).docx, Version 1 (November 2025)

Keywords
homecare products, in-can preservation, biocide efficacy, bacteria, yeast, filamentous fungi, regulatory, technical service

IBRG P16-001.05 – Method for Biocidal Active Substances Used to Preserve Aqueous-Based Paints

Method Number
IBRG P16-001.05

Method Name
Method for Biocidal Active Substances Used to Preserve Aqueous-Based Paints

Application Area
Determination of the basic efficacy of biocidal active substances for in-can preservation of aqueous-based paints for regulatory submission and technical service.

Organisms: Bacteria, yeasts, filamentous fungi.

Matrix
Aqueous-based paints.

Short Description
Samples are inoculated repeatedly with mixed suspensions of either bacteria or fungi and yeast and incubated. Bacterial and yeast populations are quantified by measuring the number of colony forming units (CFU) present after neutralisation; filamentous fungal growth of *Fusarium solani* is assessed visually and, if needed, by microscopical examination. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and use of a validated neutraliser. The method includes multiple challenge cycles.

Source Note
IBRG P16-001.05 (Method for Biocidal Active Substances used to Preserve Aqueous Based Paints).docx, Version 4 (November 2025)

Keywords
aqueous-based paints, in-can preservation, biocide efficacy, bacteria, yeast, filamentous fungi, CFU, dry weight, regulatory, technical service

IBRG PDG16-001.05 – Method for Determining the Basic Efficacy of Biocidal Active Substances Used in Polymer Dispersions

Method Number
IBRG PDG16-001.05

Method Name
Method for Determining the Basic Efficacy of Biocidal Active Substances Used in Polymer Dispersions

Application Area
Determination of the basic efficacy of biocidal active substances for in-can preservation of polymer dispersions for regulatory submission and technical service.

Organisms: Bacteria, yeasts, filamentous fungi.

Matrix
Polymer dispersions (aqueous-based).

Short Description
Samples are inoculated repeatedly with mixed suspensions of either bacteria or fungi and yeast and incubated. Bacterial and yeast populations are quantified by measuring the number of colony forming units (CFU) present after neutralisation; filamentous fungal growth of *Fusarium solani* is assessed visually and, if needed, by microscopical examination. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and validated neutraliser. The method includes multiple challenge cycles.

Source Note
IBRG PDG16-001.05 (Method for Determining the Basic Efficacy of Biocidal Active Substances used in Polymer Dispersions).docx, Version 4 (November 2025)

Keywords
polymer dispersions, in-can preservation, biocide efficacy, bacteria, yeast, filamentous fungi, CFU, dry weight, regulatory, technical service

IBRG PDG16-007.05 – Method for Determining the Basic Efficacy of Biocidal Active Substances Used to Preserve Aqueous Products

Method Number
IBRG PDG16-007.05

Method Name
Method for Determining the Basic Efficacy of Biocidal Active Substances Used to Preserve Aqueous Products

Application Area
Determination of the basic efficacy of biocidal active substances for in-can preservation of Aqueous Products for regulatory submission and technical service. Organisms: Bacteria, yeasts, filamentous fungi.

Matrix
to Preserve Aqueous Products. (Examples: Adhesive, Mineral slurries, other aqueous based products that do not have specific methods)

Short Description
Samples are inoculated repeatedly with mixed suspensions of either bacteria or fungi and yeast and incubated. Bacterial and yeast populations are quantified by measuring the number of colony forming units (CFU) present after neutralisation; filamentous fungal growth is assessed visually and, if needed, either by microscopical examination. or (if relevant / possible) by measuring the dry weight of any biomass present. Efficacy is determined by comparing treated and untreated samples. Validity requires specified inoculum density, significant growth in controls, and the use of a validated neutraliser. The method includes multiple challenge cycles and correction for matrix effects.

Source Note
IBRG PDG16-007 05 (Method for Determining the Basic Efficacy of Biocidal Active Substances used to Preserve Aqueous Products).docx, Version 5 (December 2025)

Keywords
Aqueous-based Products, in-can preservation, biocide efficacy, bacteria, yeast, filamentous fungi, CFU, dry weight, regulatory, technical service