Certificate

Quantitative test for the evaluation of bactericidal activity of chemical disinfectants under clean condition against *Staphylococcus aureus*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2025-03

Remarks on the trial design:

- The proficiency test took place from 08 September 2025 to 17 November 2025
- Each laboratory performed the test according to DIN EN 17387:2019/ VAH 14.1
- The test design included the following:
  - < Test organism: *Staphylococcus aureus*
  - < Test product: product A
  - < Interfering substances: clean condition
  - < Concentration-time-ratio of product A: 25 %/ 50 %/ 75 % - 15 min
  - < Active ingredients of product A: alcohol-based

This certificate is only valid in combination with the evaluation report of VAH ring trial R2025-03

Bonn, 09 December 2025

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative carrier test for the evaluation of mycobactericidal activity of chemical disinfectant under clean condition against *Mycobacterium terrae*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2025-02

Remarks on the trial design:

- The proficiency test took place from 02 June 2025 to 29 September 2025
- Each laboratory performed the test according to DIN EN 14563: 2009-02
- The test design included the following:
  - < Test organism: *Mycobacterium terrae*
  - < Test product: product A
  - < Interfering substances: clean condition
  - < Concentration-time-ratio of product A: 2.0%/ 2.5%/ 3.0% - 60 min
  - < Active ingredients of product A: aldehyde-based

This certificate is only valid in combination with the evaluation report of VAH ring trial R2025-02

Bonn, 24 October 2025

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Chemical disinfectants and antiseptics - Hygienic hand rub according to EN 1500:2017 against *Escherichia coli K12*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
MYS- 51200 Kuala Lumpur

participated

in the VAH ring trial R2024-03

Remarks on the trial design:

- The method ring trial took place from 06 January 2025 to 31 March 2025
- Each laboratory performed the test according to DIN EN 1500: 2017-10
- The test design included the following:
  - < Test organism: *Escherichia coli K12*
  - < Test product: product A
  - < Applied volume - application time of product A: 1 x 3 ml for 15 sec
  - < Active ingredients of product A: propan-2-ol

This certificate is only valid in combination with the evaluation report of VAH ring trial R2024-03

Bonn, 08 May 2025

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative carrier test for the evaluation of yeasticidal activity for instruments under clean conditions against *Candida albicans*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2024-02

Remarks on the trial design:

- The proficiency test took place from 02 September 2024 to 15 November 2024
- Each laboratory performed the test according to DIN EN 14562:2006 or VAH 15
- The test design included the following:
  - < Test organism: *Candida albicans*
  - < Test product: product A
  - < Interfering substances: clean condition
  - < Concentration-time-ratio of product A: 0.1/ 0.25/ 0.5 % - 15 min
  - < Active ingredients of product A: aldehyde-based

This certificate is only valid in combination with the evaluation report of VAH ring trial R2024-02

Bonn, 12 December 2024

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative suspension test for the evaluation of bactericidal activity in the medical area under dirty conditions against *Enterococcus hirae*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2024-01

Remarks on the trial design:

- The proficiency test took place from 06 May 2024 to 28 June 2024
- Each laboratory performed the test according to DIN EN 13727 or VAH 9
- The test design included the following:
  - < Test organism: *Enterococcus hirae*
  - < Test product: product A
  - < Interfering substances: dirty condition
  - < Concentration-time-ratio of product A: 0,025%, 0,05%, 0,1% -15 min
  - < Active ingredients of product A: Quat-based

This certificate is only valid in combination with the evaluation report of VAH ring trial R2024-01

Bonn, 08 August 2024

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative carrier test for the evaluation of bactericidal activity of chemical disinfectants used for instruments in the medical area with *Pseudomonas aeruginosa*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
Jalan Kepayang, Off Jalan Kuching
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2023-02

Remarks on the trial design:

- The method ring trial took place from 13 November 2023 to 19 January 2024
- Each laboratory performed the test according to DIN EN 14561: 2006-08
- The test design included the following:
  - < Test organism: *Pseudomonas aeruginosa*
  - < Test product: product A
  - < Interfering substances: clean condition
  - < Concentration-time-ratio of product A: 0.01% / 0.02% / 0.03% - 15 min
  - < Active ingredients of product A: Quat-based

This certificate is only valid in combination with the evaluation report of VAH ring trial R2023-02

Bonn, 29 February 2024

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative suspension test (phase 2, step 1) for the evaluation of bactericidal activity in medical area under clean condition with *Staphylococcus aureus*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
Jalan Kepayang, Off Jalan Kuchuing
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2023-01

Remarks on the trial design:

- The proficiency test took place from 23 May 2023 to 21 July 2023
- Each laboratory performed the test according to DIN EN 13727: 2015-12
- The test design included the following:
  - < Test organism: *Staphylococcus aureus*
  - < Test product: product A
  - < Interfering substances: clean condition
  - < Concentration-time-ratio of product A: 0.01%, 0.05%, 0.01% - 5 min
  - < Active ingredients of product A: Glutaraldehyde

This certificate is only valid in combination with the evaluation report of VAH ring trial R2023-01

Bonn, 27 October 2023

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Chemical disinfectants and antiseptics - Hygienic handrub - Test method and requirements (phase 2/step 2) *Escherichia coli K12*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
Jalan Kepayang, Off Jalan Kuchuing
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2022-02

Remarks on the trial design:

- The proficiency test took place from 24 October 2022 to 02 February 2023
- Each laboratory performed the test according to DIN EN 1500: 2017-10
- The test design included the following:
  - < Test organism: *Escherichia coli K12*
  - < Test product: Product A
  - < Applied volume - application time of product A: 1 x 3 mL for 30 sec
  - < Active ingredients of product A: Ethanol

This certificate is only valid in combination with the evaluation report of VAH ring trial R2022-02
EN 1500:2027-10

Bonn, 21 March 2023

K. Roesch M.Sc.

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative test method for the evaluation of bactericidal activity on non-porous surfaces without mechanical action against *Enterococcus hirae*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
Jalan Kepayang, Off Jalan Kuchuing
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2022-01

Remarks on the trial design:

- The proficiency test took place from 30 May 2022 to 29 July 2022
- Each laboratory performed the test according to VAH method 14.1; DIN EN 17387
- The test design included the following:
  - < Test organism: *Enterococcus hirae*
  - < Test product: Product A
  - < Interfering substances: dirty conditions
  - < Concentration-time-ratio of product A: 30% - 5 min; 40% - 5 min; 50% - 5 min; 60% - 5 min
  - < Active ingredients of product A: Ethanol

This certificate is only valid in combination with the evaluation report of VAH ring trial R2022-01

Bonn, 13 September 2022

Dr. rer. nat. S. Gemein

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative test method for the evaluation of yeasticidal activity on non-porous surface with mechanical action against *Candida albicans*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
Jalan Kepayang, Off Jalan Kuchuing
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2021-02

Remarks on the trial design:

- The proficiency test took place from 08 November 2021 to 07 January 2022
- Each laboratory performed the test according to VAH Methode 14.2 resp. EN 16615
- The test design included the following:
  - < Test organism: *Candida albicans*
  - < Test products: product A and product B
  - < Interfering substances: dirty conditions
  - < Concentration-time-ratio of product A: 2% - 15 min
  - < Active ingredients of product A: quaternary compounds, alcylamine
  - < Concentration-time-ratio of product B: 0,5% - 30 min
  - < Active ingredients of product B: quaternary compounds, alcylamine

This certificate is only valid in combination with the evaluation report of VAH ring trial R2021-02

Bonn, 31 May 2022

Dr. rer. nat. S. Gemein

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)

Certificate

Quantitative suspension test (phase 2, step 1) for the evaluation of bactericidal activity against *Pseudomonas aeruginosa*

Herewith we certify, that the laboratory of

TECOLAB Sdn. Bhd.
J-2-6, Pusat Komersial Jalan Kuching, No. 115
Jalan Kepayang, Off Jalan Kuchuing
MYS- 51200 Kuala Lumpur

participated successfully

in the VAH ring trial R2021-01

Remarks on the trial design:

- The proficiency test took place from 24 May 2021 to 19 July 2021
- Each laboratory performed the test according to DIN EN 13727: 2015-12
- The test design included the following:
  - < Test organism *Pseudomonas aeruginosa*
  - < Test product: Product A
  - < Interfering substances: dirty conditions
  - < Concentration-time-ratio of product A: 0,5%-15 min; 0,25%-15 min; 0,05%-15 min; 0,025%-15 min
  - < Active ingredients of product A: quaternary compounds, alcylamine

This certificate is only valid in combination with the evaluation report of VAH ring trial R2021-01
This certificate dated 12 January 2022 replaces the certificate dated 30 November 2021

Bonn, 12 January 2022

Dr. rer. nat. S. Gemein

Dr. rer. nat. J. Gebel

Verbund für Angewandte Hygiene e.V. (VAH)