



**GUI – Gesellschaft für
Umwelt- und Innenraumanalytik
mbH**

Berliner Platz 12
41061 Mönchengladbach
Phone: +49 / 2161 / 823 92 -0
elefax: +49 / 2161 / 823 92 -22
E-Mail: info@gui-lab.de
www.gui-lab.de

ANALYSIS REPORT

Ihr Zeichen/ Your Code:
Ihre Nachricht vom/ Your letter Date:

Report number: **090115-01**
Customer: Joker AG/SA
Postfach 96
Industriezone 27
CH-3210 Kerzers

Mein Zeichen/ My Code: **AW/Ni**

Datum/ Date: **2009-03-09**

Test item: **Cyber Clean**

Contract date: **2008-12-15**
Sample arrival date: **2009-01-15**
Test period: **2009-01-15 – 2009-02-27**

Bankaccount:
Stadtsparkasse Mönchengladbach
Kto.No.: 333 5924
BLZ: 310 500 00
IBAN: DE44 310 500 00 0003335924
SWIFT: MGLSDE33

Gladbacher Bank AG
Mönchengladbach
Kto.Nr.: 74725015
BLZ: 310 601 81
IBAN: DE71 3106 0181 0074 7250 15
SWIFT: GENO DE D1 GBM

Managing directors:
Dr. Andreas Winkens VDI
Dipl.-Kfm. Norbert Krämer
Amtsgericht Mönchengladbach HRB 12304
USt-Id Nr.: DE 255 934 812
Steuer-Nr.: 121/5718/0930

Note:

In case of copying or publishing the report must completely copied/ published. To copy or publish this report partly can change the statement of the report and requires a written permission by the laboratory.

1. Task

According to valid Suisse, Austrian and German guidelines, the hygienic state of air conditioning plants have to be ensured. For this purpose the sustainable cleaning of all air exposed installations is important. The following analyses serve as a suitability test for the product Cyber Clean.

2. Sampling

The test items were selected by the customer who provided 24 samples of Cyber Clean.



Image 1: Test sample at time of arrival

3. Materials and Methods

3.1 Cleaning of air conditioners with Cyber Clean

As described in the manual Cyber Clean was repeatedly pressed hard on the test surfaces (during the cleaning of the supply air lamella and the discharged air lamella about 3-4 seconds). Wiping was avoided during the cleaning procedure.



Image 2: Cleaning procedure

3.2 Microbiological investigation of the surfaces with swab sampling ^[A]

Swab samples were taken with a sterile cotton swab from the cleaned and the not cleaned surfaces (approx. 20 cm² each). The swabs were moistened with sterile buffer and then wiped easily over the test surface. In a following step the swab was wiped over a nutrient medium (malt extract agar for moulds and CASO-agar for bacteria). The petridishes with malt extract agar were stored after sampling at 25°C in an incubator. The vital and colony forming fungi (cfu = colony forming units) were counted after 4 and 8 days of incubation. The petridishes with CASO-Agar were stored after sampling at 32°C in another incubator. The vital and colony forming bacteria (cfu = colony forming units) were counted after 48 hours of incubation. The results were specified as cfu per petridish, a quantitative statement for the tested surface is not possible.



Image 3: Sampling

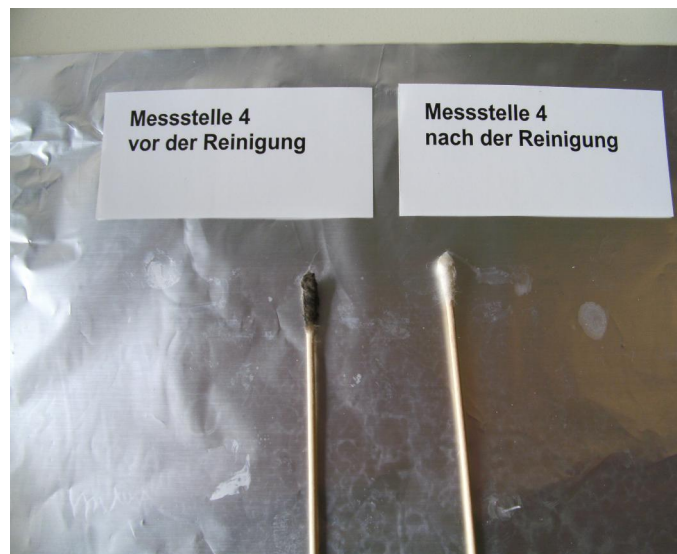


Image 4: Cotton swabs after sampling

Legende:

- [A] akkreditiertes Verfahren
- [nA] nicht akkreditiertes Verfahren
- [F] Fremdvergabe
- [F_a] Fremdvergabe an akkreditiertes Labor
- [U] Vergabe im Unterauftrag

4. Results¹

4.1 Mould concentrations of swab samples

Sampling site	Before cleaning [cfu/petridish]	After cleaning [cfu/petridish]
MS1 Corridor	3	0
MS2 Office Me.	3	0
MS3 Office Vi.	2	0
MS4 Office Vo. 1	2	0
MS5 Office Vo. 2	3	0
MS6 Conference room	2	0
MS7 Kitchen	3	0
MS7a Kitchen, discharged air	2	0
MS8 Office Mo.	1	0
MS9 Office Sc.	2	0
MS10 Office Th.	3	0

4.2 Bacteria concentrations of swab samples

Sampling site	Before cleaning [cfu/petridish]	After cleaning [cfu/petridish]
MS1 Corridor	12	0
MS2 Office Me.	101	0
MS3 Office Vi.	361	19
MS4 Office Vo. 1	59	3
MS5 Office Vo. 2	12	0
MS6 Conference room	25	1
MS7 Küche	12	1
MS7a Küche, discharged air	339	2
MS8 Office Mo.	9	0
MS9 Office Sc.	11	2
MS10 Office Th.	26	2

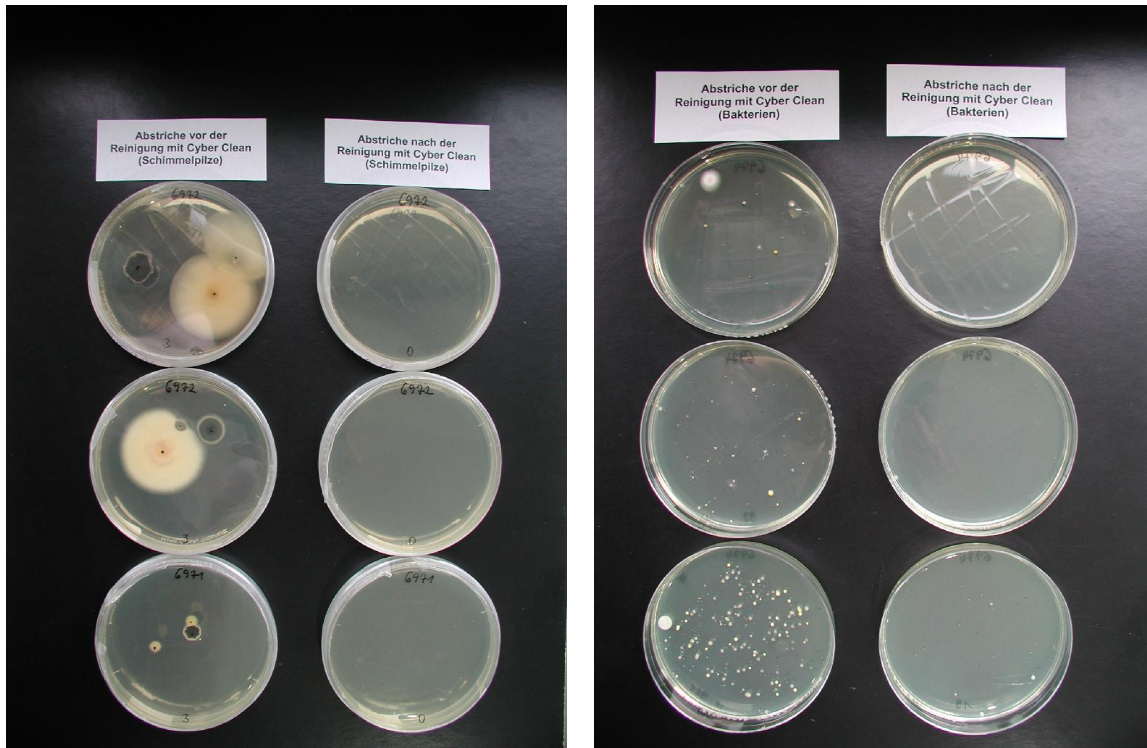
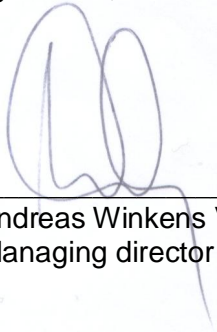


Image 5: Swab samples for the investigation of moulds (left) and bacteria (right) taken before and after the surface cleaning with Cyber Clean.

4.3 Cleaning efficiency of Cyber Clean (total)

	Before cleaning [total cfu]	After cleaning [total cfu]	Percent reduction of the total cfu
Moulds	26	0	100%
Bacteria	967	30	97%

Mönchengladbach, 2009-03-09



(Dr. Andreas Winkens VDI)
- Managing director -



(Dipl.-Ing. Frank Praetorius VDI)
- Technical director -



Assessment and recommendation¹

To analysis report no.: 090115-01

After cleaning with Cyber Clean the total count of bacteria on the test surface was reduced by 97%. The moulds were not detectable any more at all sampling sites M1-M10 on the surfaces after cleaning.

So the product has a significant efficiency on moulds and bacteria and can be used to clean even hygienic precarious and severely contaminated facilities up to a decent hygienic state.

GUI – Gesellschaft für Umwelt- und Innenraumanalytik
Mönchengladbach, 2009-03-09

(Dr. Andreas Winkens VDI)
- Managing director -

(Dipl.-Ing. Frank Praetorius VDI)
- Technical director -

¹ The assessment and recommendation are exclusively based on the presented test item.