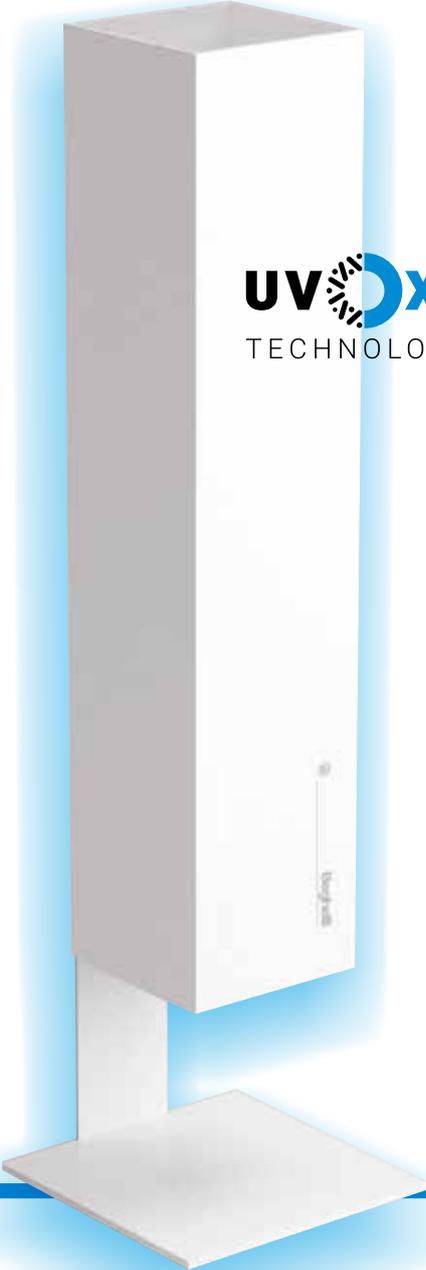


RAUMLUFT - SANITISIERUNG

Nachgewiesene Wirksamkeit von bis zu **99,9%**
auf Viren und Bakterien



Sanifica Aria 30

Ein Gerät ist geeignet für Raumgrößen bis 50m².
In größeren Räumen können auch mehrere
Aria 30 verwendet werden.

UV OXY
TECHNOLOGIE

- **Kontinuierliche Desinfektion von Räumen**
- **Wirksam auch bei Vorhandensein von Klimaanlage**
- **Niedriges Geräuschniveau**
- **Keine Emissionen von Ozon - O₃**

 **Nach ISO 15714 geprüftes Produkt und gemäß IEC 60335-2-65 für Luftreiniger klassifiziert.**

 * Die in einem nach UNI CEI EN ISO / IEC 17025: 2018 akkreditierten Labor durchgeführten Tests zeigen die Wirksamkeit von uvOxy bei einer Vielzahl von Bakterien, Viren und anderen Mikroorganismen.

Für Anwendungen im Dienstleistungsbereich, Krankenhäusern, Hotels, Schulen, Büros, Restaurants, Geschäften, Bars, Wohnungen usw.



IHR PARTNER FÜR
LADENAUSSTATTUNG

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RAUMLUFT - SANITISIERUNG

Sanifica **Aria 30** **UV**  **oxy**
TECHNOLOGIE

SCHULE / UNIVERSITÄT



BÜRO / BEHÖRDEN



GASTRONOMIE



HOTELS / PENSIONEN / FERIEWOHNUNGEN



PRAXEN



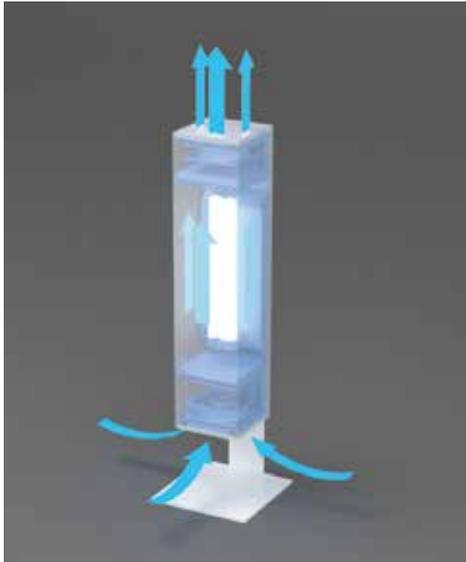
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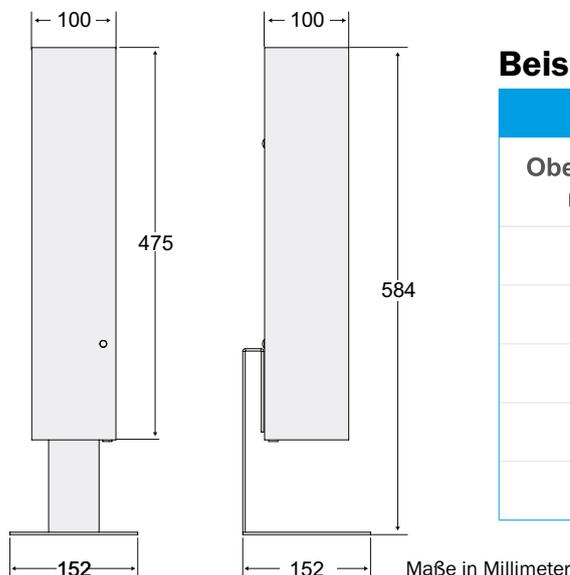
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Intelligenter Raumluf-Sanitisierungskreislauf uvOxy®



Alle Geräte der Beghelli SanificaAria-Linie sind mit der uvOxy®-Technologie ausgestattet, die kontaminierte Luft „einatmet“ und hygienisch gereinigte Luft „ausatmet“. Beim Modell Sanifica Aria 30 wurde die UV-C Kammer so dimensioniert, dass sie für kleine und mittlere Umgebungen geeignet ist. Der Einsatz von 2 Axialventilatoren ermöglicht es, bis zu 30 m³ Luft in einer Stunde zu behandeln. Das Gerät ist mit einer automatischen Temperaturregelung der UV-C-Röhre durch Mikrocontroller ausgestattet, die das System unter allen Umgebungsbedingungen auf maximaler Effektivität hält.



Beispiel für die Raumlufsanitisierung

Raumgröße		
Oberfläche m²	Raumvolumen m³	Sanierungszeit h
6	15	0,5
13	30	1
25	60	2
38	90	3
50	120	4

Wandmontage



Montage mit Bodenhalterung



Montage auf Möbel oder Konsolen



Deckenmontage



LIEFERUMFANG



**NETZKABEL
MIT SCHALTER**
Länge 2 m

ERSATZTEILE – müssen separat bestellt und alle 12 Monate* ersetzt werden



SANITISIERUNGSPATRONE uvOxy 30
Einschließlich UV-C-Durchflusszelle

Best.-Nr. 950926



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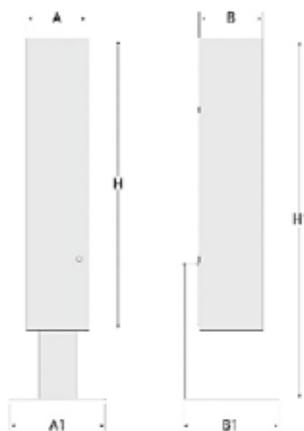
INFORMATIVE NOTE

Valsamoggia, 29/07/2020

SUBJECT: Germicidal irradiation assessment of the UV-C device "SanificaAria 30":

- **Evaluation of antiviral activity against Coronavirus and Adenovirus**
- **ISO 15714: 2019 Standard - Test microorganisms - Coronavirus cluster impact**
- **Conformity to clause 32.102 of IEC 60335-2-65:2002**

Beghelli developed a system called SanificaAria 30, with the technical features listed in figure 1, that consists of an axial fan suction system that introduces air into the closed chamber which contains the UV-C source, where the sanitization process is carried out:



TECHNICAL FEATURES SanificaAria 30
Power supply: 230Vac ±10%, 50÷60Hz
Local switch on the power cord
Absorption: 24W
UV-C Lamp: TC 2G11 18W
Wave length UV-C: 254nm
Sanitization airflow rate: 30m³/h
Radiant power UV-C: 5,5W
Ozone Free UV-C Lamp
Cartridge life: 12 months
Noise level: 40dB(A) at 1 meter
Weight: 3,5kg
 The product can be classified as an air purifier according to the norm IEC 60335-2-65 'Household and similar electrical appliance - safety - part 2-65 particular requirements for air cleaning appliances'



Dimensions mm						Sanitization airflow rate
A	B	H	A1	B1	H1	
100	100	475	152	152	584	30 m³/h

Figure 1

The product can be classified as an air purifier according to the norm IEC 60335-2-65:2002 "Household and similar electrical appliance - safety - part 2-65 particular requirements for air cleaning appliances".

The tests to evaluate the anti-viral efficacy of the SanificaAria 30 Beghelli system were carried out at the Microbiology and Virology Laboratory of UNIMORE - University of Modena and Reggio Emilia.

The activity involved the use of 2 types of viruses (Adenovirus and OC43, Coronavirus HCoV-OC43 very similar to the HCoV-SARS-2 responsible for CoViD-19).

The virus used in this study is the human Coronavirus HCoV-OC43 which has an extremely high homology of structure with the virus responsible for CoViD-19, HCoV-SARS-2, both from a phylogenetic and molecular point of view.

Since germicidal treatments act with non-specific mechanisms, morphologically similar viruses respond in a similar way to inactivation. Therefore, HCoV-OC43 has been used in several viral persistence / inactivation studies as a substitute for the highly pathogenic Coronaviruses SARS-1, SARS-2 and MERS.

In addition, AdenoVirus-5 (AdV) was also used, having much greater resistance than that of HCoV-OC43. It is required for certification tests for virucidal systems according to UNI EN standards.

The test results showed that the virucidal action of SanificaAria 30 is as follows:

CORONAVIRUS HCoV-OC43: deactivation percentage 99.7% (logarithmic reduction 2.5)
ADENOVIRUS AdV-5 : deactivation percentage 94.4% (logarithmic reduction 1.25)

(ENCL. 1: TPM/UNIMORE Report - Cover pages)

The scope of this project is to assess the germicidal activity of the device against microorganisms that differ from each other in terms of resistance to UV-C light itself.

The analyses are carried out at the UNI CEI EN ISO / IEC 17025: 2005 accredited laboratory Tecnal srl, in collaboration with Gelt International srl, between 12/06/2020 and 13/07/2020.

The test is performed following the prescriptions, as applicable, of the technical norm ISO 15714: 2019 *Method of evaluating the UV dose to airborne microorganisms transiting in-duct ultraviolet germicidal irradiation devices*. The norm describes a method in laboratory to assess the performance of ultraviolet germicidal irradiation (UVGI) devices which will be mounted in-duct in heating, ventilating and air-conditioning (HVAC) systems.

The microorganisms described at chapter 6 of the norm are used for the test, and they are listed in table 1.

Table 1: test microorganisms, as per chapter 6 of the ISO norm.

TEST MICROORGANISM	MICROORGANISM REFERENCE	GROUP	DOSE D90* (J/m ²)
<i>Serratia marcescens</i>	ATCC 13880	Gram negative bacteria	< 25
<i>Bacillus subtilis</i>	ATCC 6633	Gram positive bacteria	25 ÷ 120
<i>Cladosporium sphaerospermum</i>	ATCC 11289	Fungus	> 120

* UV-C effective dose necessary for the inactivation of the 90% of the microorganisms.

The results of the present study confirm that the SanificaAria 30 device by Beghelli has an effective UV-C dose between 25 and 120 J / m², inactivating up to 90% of the Gram positive microorganisms and up to 99% of the Gram negative test microorganisms. The test fungus, *Cladosporium sphaerospermum*, is inactivated no more than 33% since it would actually require higher UV doses.

The Annex C of the ISO 15714: 2019 reports a long list of scientific literature data relating to the UV-C doses (D90) required to inactivate the 90% of different microorganisms, bacteria, viruses, fungi and others. On the basis of the data obtained from the laboratory tests which show a proven ability of the SanificaAria 30 system to express an effective D90 dose of about 120 J/m², it is possible to point out a list of microorganisms including CORONAVIRUS which on the basis of these literature data, can be inactivated by the same system.

(ENCL. 2- TECNAL Report – Cover page)



The product have been tested by IMQ laboratories to positively verify the conformity to the requirement of IEC 60335-2-65 as far as the safety of the UV-C radiation emission is concerned (sub clause 32.102).

(ENCL. 3 - IMQ Test Report – Cover page)

BEGHELLI SPA
Ing. Fabio Pedrazzi

ENCLOSED:

- TPM/UNIMORE Report- Cover pages (Encl. 1)
- TECNAL Report – Cover page (Encl. 2)
- IMQ Test Report – Cover page



REPORT FINALE



Valutazione trattamento virucida ad opera del dispositivo
SanificAria 30 sull'aria ambientale per mezzo di radiazioni
UVc

Report n°1
MS2_2020_R42
Edizione: 01
Pagina: 1 di 3

CLIENTE	BEGHELLI spa Via Mozzaghina 13/15 - loc. Montavoglio 40053 Valsamoggia, Bologna - P.IVA: 00666341201		
LABORATORIO	<input checked="" type="checkbox"/> X MaB - Microscopia applicata e biologia cellulare - <input type="checkbox"/> X ToP - Tossicologia e Proteomica - <input checked="" type="checkbox"/> X Ma³ - Materiali, sensori e sistemi -		
Analisi svolte da: Mattia Piccini mattia.piccini@tpm.bio	Firma 	Data	28/07/2020
Responsabile di laboratorio: Alberto Ferrari alberto.ferrari@tpm.bio	Firma 	Data	28/07/2020
Approvato da: Luigi Rovati, luigi.rovati@unimore.it Scientific Director of materials, sensors and systems laboratory.	Firma 	Data	28/07/2020

Id.	Report n°	Data	Descrizione
01	MS2_2020_R42	28/07/2020	Prima edizione

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...OMISSIS....



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Odontoiatrico e di Scienze
Morfologiche con Interesse
Trapiantologico, Oncologico e di
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Contratto di ricerca tra l'Università degli Studi di Modena e Reggio Emilia,
Dipartimento di Dipartimento Chirurgico, Medico, Odontoiatrico e di Scienze
Morfologiche con Interesse Trapiantologico, Oncologico e di Medicina
Rigenerativa e la Fondazione DEMOCENTER-Sipe di Modena

Valutazione dell'attività antivirale nei confronti di AdV e di
HCoV-OC43 di un sistema germicida a radiazioni UV su un
materiale (+ controllo) per un unico tempo di esposizione ed ad
un'unica distanza)

RELAZIONE FINALE

INTRODUZIONE

Il virus utilizzato in questo studio è il Coronavirus umano HCoV-OC43 che ha una omologia di struttura estremamente alta con il virus responsabile della COVID-19, HCoV-SARS-2, dal punto di vista sia filogenetico che molecolare. Essi infatti appartengono entrambi al gruppo β -Coronavirus in una posizione estremamente vicina nell'albero filogenetico. L'omologia è tale che alcuni anticorpi, anche altamente specifici contro HCoV-OC43, riconoscono anche SARS-2. Questo indica come la presenza, che sono il costituente principale dell'impalcatura della particella virale e ne determinano la resistenza, siano estremamente simili tra i due virus. Poiché i trattamenti germicidi agiscono con meccanismi non specifici, virus morfologicamente simili rispondono in maniera sovrapponibile all'inattivazione. Pertanto, HCoV-OC43 è stato utilizzato in diversi studi sulla persistenza/inattivazione virale come modello

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Cap. Sociale € 1.000,00 i.e.
Registro Imprese di Bologna
REA 035891



Germicidal irradiation
assessment of the UV-C
device "SanificaAria 30"

BEGHELLI SPA

Contact person:
Chiara Piana, PhD
c.piana@geltinternational.it

Issuing date:
14/07/2020

Revision:
20TR0026/01



TEST REPORT

RAPPORTO DI PROVA

No. AI20-0053702-01

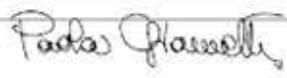
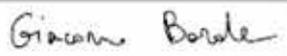
Household and similar electrical appliances - Safety - Part 2: Particular requirements for air-cleaning appliances performed in accordance with

IEC 60335-2-65:2002+AMD1:2008+AMD2:2015 (subclause 32.102)

Elettrodomestici e apparecchi simili - Sicurezza - Parte 2: prescrizioni particolari per apparecchi di depurazione dell'aria in conformità a IEC 60335-2-65:2002+AMD1:2008+AMD2:2015 (paragrafo 32.102)

PRODUCT <i>PRODOTTO</i>	Air-cleaning device <i>Dispositivo per la sanificazione dell'aria</i>
MODEL(s) TESTED <i>MODELLO(I) PROVATO(I)</i>	SANIFICA ARIA 30
TRADE MARK(s) <i>MARCHIO</i>	BEGHELLI

APPLICANT <i>RICHIEDENTE</i>	Beghelli S.p.A. - Via Mozzeghine, 13/15 - 40053 Valsamoggia - Località Monteveglio (Bologna) Italy
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Tested by <i>Provato da</i>	Paola Giannetta <i>[Laboratory Technician] [Tecnico di Laboratorio]</i>	
Approved by <i>Approvato da</i>	Giacomo Barale <i>[Laboratory Manager] [Responsabile di Laboratorio]</i>	

Revision Sheet *Indice di revisione*

Release No. <i>Emissione Nr.</i>	Date of issue <i>Data di emissione</i>	Revision Description <i>Descrizione della Revisione</i>
Rev. 0	2020, 06 th July <i>06 luglio 2020</i>	First edition <i>Prima emissione</i>

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