



GCA ANTIVIR

ANTI-VIRUS AND ANTI-BACTERIAL PROTECTION

PERSISTENT HYDROPHOBIC NANO PROTECTION OF GLASS, CERAMICS, METALS, PAINTS AND SOLID MATERIALS

GUARANTEED LIFE OF 120 DAY PROTECTION

GCA ANTIVIR is a specifically developed nano ANTIVIR and ANTIBACTERIAL protection of solid materials (glass, ceramics, glazed ceramics, enamel, marble, porcelain, granite, paints, plastic, varnishes and other non-absorbent surfaces such as painted metals, stainless steel, aluminum and others). An ultra-thin hydrophobic invisible ANTIVIRAL and ANTIBACTERIAL layer with excellent protection against contamination, deposition of mineral and calcium coatings, water rust with a self-cleaning effect (lotus effect) is formed on the surface. **The created layer prevents the life of viruses (also enveloped viruses Vaccinia virus, strain Modified Vaccinia virus Ankara), bacteria, moss, fungi and algae, creates a very hygienic**

With its long-lasting effect, it protects the treated surface from water, dirt and, with its long-term hydrophobic effect, significantly facilitates subsequent cleaning without the use of hazardous chemicals. Prevents the formation of calcium and mineral deposits. IG GCA ANTIVIR provides highly effective and economical protection on surfaces such as - handles, railings, sanitary facilities, work surfaces, glass surfaces, faucets, washbasins, shower enclosures, tiles, toilets, kitchens, offices, etc ..

The antibacterial test was performed by the State Institute of Public Health with a minimum efficiency of 99.7% and even for yeasts 87.8%.

Used microorganisms :

yeast *Candida albicans* CCM 8215, *Escherichia coli* CCM 4517,
Salmonella typhimurium C-17-1605, *Staphylococcus aureus* CCM 4516,
Streptococcus pyogenes CNCTC 7155 (ATCC 12344, CNCTC Str 29/58, NCTC 8198)

The long-lasting antibacterial test No. 191477 was performed by the State Health Institute with a minimum efficiency of 99.7% and even for yeasts 87.8%.

UP TO 120 DAYS!

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- **The latest certificates of the State Health Institute also for viruses**
- **Excellent prevention against dirt and pollution**
- **It evaporates quickly**
- **Thanks to retraction, it significantly facilitates subsequent cleaning**
- **Simple and easy application**

State Institute of Public Health results

The results of the experiments are shown in the tables below. The results are the average of three determinations of each sample and are expressed as the average number of live microorganisms in the area of the ceramic samples tested. The number of surviving microorganisms is also expressed as a percentage - the number of live bacteria on ceramic samples not treated with the tested products is given as 100%.

The result of yeast survival <i>Candida albicans</i> CCM 8215	Number of bacteria / sample	Surviving yeast	Loss of bacteria
		%	
Sample - 14 days from treatment Impaguard GCA	< 10	< 0,1	> 99,9
Sample - 21 days from treatment Impaguard GCA	1,8.10 ²	1,8	98,2
Sample - 6 weeks from treatment Impaguard GCA	2,7.10 ²	8,7	91,3
Sample - 11 weeks from treatment Impaguard GCA	6,2.10 ²	10,5	89,5
Sample - 17 weeks from treatment Impaguard GCA	9,3.10 ³	11,5	88,5

The result of bacterial survival <i>Escherichia coli</i> CCM 4517	Number of bacteria / sample	Surviving yeast	Loss of bacteria
		%	
Sample - 14 days from treatment Impaguard GCA	< 10	< 0,1	> 99,9
Sample - 21 days from treatment Impaguard GCA	3,6.10 ³	0,3	99,7
Sample - 6 weeks from treatment Impaguard GCA	4,4.10 ⁴	0,6	99,4
Sample - 11 weeks from treatment Impaguard GCA	4,5.10 ⁴	0,9	99,1
Sample - 17 weeks from treatment Impaguard GCA	9,9.10 ⁴	4,3	95,7

The result of bacterial survival <i>Staphylococcus aureus</i> CCM 4516	Number of bacteria / sample	Surviving yeast	Loss of bacteria
		%	
Sample - 14 days from treatment Impaguard GCA	< 10	< 0,1	> 99,9
Sample - 21 days from treatment Impaguard GCA	2,7.10 ⁴	2,8	97,2
Sample - 6 weeks from treatment Impaguard GCA	3,1.10 ⁴	3,4	96,6
Sample - 11 weeks from treatment Impaguard GCA	3,1.10 ⁴	4,2	95,8
Sample - 17 weeks from treatment Impaguard GCA	6,9.10 ⁴	7,8	92,2

The result of bacterial survival <i>Salmonella typhimurium</i> C-17-1605			
Untreated sample	3,2.10 ³	100	0
Sample treated with "IMPAGUARD GCA"	< 10	< 0,3	> 99,7

The result of bacterial survival <i>Salmonella typhimurium</i> C-17-1605			
Sample treated with "IMPAGUARD GCA"	< 10	< 0,3	> 99,7

Results of the Antivirus protection test of the Health Institute, scan :

Výsledky zkoušky:

Výsledky testů jsou uvedeny v tabulkách. Uvedené výsledky jsou průměrem ze dvou (1.test) nebo třech (2) stanovení každého vzorku a jsou vyjádřena jako průměry počítaných logaritmů titrů viru. Rozdíl v titru na testovaných vzorcích je uváděn v logaritmech oproti kontrolním vzorkům viru na neošetřených vzorcích.

Tabulka 1: Výsledky zkoušky pro přípravek Impaguad GCA pro Vaccinia virus, kmen Modifikovaný Vaccinia virus Ankara – vyšší znečištění

Produkt	Interferující podmínky	log ₁₀ TCID ₅₀ /ml	Redukční faktor (Δlog ₁₀ TCID ₅₀ /ml)
Impaguad GCA – 5 min po nanesení	3 g/l BSA + erythrocyty	6,250 ± 0,160	- 0,167 ± 0,486
Impaguad GCA – ihned po zaschnutí (40 min)		6,000 ± 0,000	0,083 ± 0,527
Impaguad GCA – 1 hod po zaschnutí		5,667 ± 0,089	0,417 ± 0,408
Impaguad GCA – 24 hod po zaschnutí		3,500 ± 0,000	2,000 ± 0,000
Virová kontrola – ihned po zaschnutí		6,083 ± 0,184	
Virová kontrola – 24 hod po zaschnutí		5,500 ± 0,000	

Tabulka 2: Výsledky zkoušky pro přípravek Impaguad GCA pro Vaccinia virus, kmen Modifikovaný Vaccinia virus Ankara – nízké znečištění

Produkt	Interferující podmínky	log ₁₀ TCID ₅₀ / ml	Redukční faktor (Δlog ₁₀ TCID ₅₀ / ml)
Impaguad GCA – 5 min po nanesení	0,3 g/l BSA	6,500 ± 0,000	- 0,417 ± 0,367
Impaguad GCA – ihned po zaschnutí (40 min)		5,250 ± 0,160	0,833 ± 0,486
Impaguad GCA – 1 hod po zaschnutí		5,000 ± 0,178	1,083 ± 0,512
Impaguad GCA – 24 hod po zaschnutí		2,500 ± 0,000	3,000 ± 0,000
Virová kontrola – ihned po zaschnutí		6,083 ± 0,184	
Virová kontrola – 24 hod po zaschnutí		5,500 ± 0,000	

Tabulka 3: Výsledky zkoušky pro přípravek Impaguad GCA pro Vaccinia virus, kmen Modifikovaný Vaccinia virus Ankara – vyšší a nízké znečištění

Produkt	Interferující podmínky	log ₁₀ TCID ₅₀ / ml	Redukční faktor (Δlog ₁₀ TCID ₅₀ / ml)
Impaguad GCA – 24 hod po zaschnutí	3 g/l BSA + erythrocyty	4,778 ± 0,122	1,611 ± 0,403
Virová kontrola – 24 hod po zaschnutí		6,389 ± 0,160	
Impaguad GCA – 24 hod po zaschnutí	0,3 g/l BSA	2,500 ± 0,000	3,444 ± 0,356
Virová kontrola – 24 hod po zaschnutí		5,944 ± 0,182	

Tabulka 4: Výsledky zkoušky pro přípravek Impaguad GCA Black pro Vaccinia virus, kmen Modifikovaný Vaccinia virus Ankara – vyšší a nízké znečištění

Produkt	Interferující podmínky	log ₁₀ TCID ₅₀ / ml	Redukční faktor (Δlog ₁₀ TCID ₅₀ / ml)
Impaguad GCA – 24 hod po zaschnutí	3 g/l BSA + erythrocyty	4,111 ± 0,206	2,278 ± 0,523
Virová kontrola – 24 hod po zaschnutí		6,389 ± 0,160	
Impaguad GCA – 24 hod po zaschnutí	0,3 g/l BSA	2,500 ± 0,000	3,444 ± 0,356
Virová kontrola – 24 hod po zaschnutí		5,944 ± 0,182	

The utilization of **IMPAGUARD GCA ANTIVIR** is huge, it was developed for the ever-increasing requirements for safe **antiviral and antibacterial** protection with a healing effect and the **elimination of insufficient disinfection during surface maintenance**. It is used in production, maintenance, services, shops (food, medical, agricultural industry, machine skeletons, structures, protective parts, public transport, offices, sales equipment, hotels, restaurants, offices, showrooms, etc.), where due to its composition significantly reduces the cost of maintenance and disinfection cleaning in the form of protection and thus significantly reduces the frequency of subsequent cleaning and labor costs. Thanks to its composition, **IG GCA ANTIVIR** significantly reduces the costs of maintenance, disinfection and cleaning in the form of long-lasting protection and thus reduces the frequency of subsequent cleaning. Reducing costs is one of the tasks today. NANO protection IG GCA ANTIVIR is an excellent answer to save significantly and in addition give products and surfaces one of the most modern surface treatments with excellent properties. Recommended applications are stainless steel structures, protective and skeletal parts, stainless steel equipment for production facilities, food plants, kitchens, stainless steel hygiene items, equipment for special workplaces, tiles, kitchens, factories, any painted surfaces without heavy mechanical stress, plastic sanitary areas, shower enclosures, tiles, toilets, etc., where, in addition, they protect against pollution, UV radiation, atmospheric influences, deposition of calcium and mineral coatings.

It is used both in production and maintenance (automotive, plastics, electronics and optical industries, etc.), for plastic equipment of cars, buses, public transport, trains, ships, agricultural machinery, and in various sectors of maintenance such as: public buildings, sports centers, hotels, wellness centers, shopping centers (equipment of shops and premises) and in special operations, equipment of special workplaces and where due to its composition significantly reduces maintenance costs and bactericidal cleaning in the form of protection and thus significantly reduce the frequency of subsequent cleaning and work. The created film creates an antibacterial hygienic surface with a long cleaning interval.

Consumption	Num.of layers	Time between layers apply	Polymerization time	Base	look
60-85 m ² /L	2	10 min	Do 30 min	Ethyl-acetat	liquid

Application of IG GCA ANTIVIR: The product is used on surfaces that are not hot or wet. Carefully degrease the surface with GCA ODORNER or GCA QUICKDEG, apply to the surface, leave on for about 8-10 minutes and wipe dry. In the case of a new surface, it is applied directly. Apply IG GCA ANTIVIR with a sponge in a crosswise manner. Apply evenly over the surface to ensure that no space is left out. We recommend applying two coats, the second coat only after the first coat is completely dry (15 min.). After the second layer has dried, gently wipe the surface with a dry and clean cloth. Clean the treated surface with GCA NEUTREN for long-lasting protection. In case of application by spraying or machine, contact our technical department. **Due to the wide range of surfaces, we recommend performing before the actual application**

TEST for surface finish compatibility.

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