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Instructions for Use

NexXZr®

Coloring Liquid

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Product Information

The coloring liquids available from Sagemax Bioceramics, Inc. offer a wide range of color options and deliver reproducible and highly aesthetic results for zirconium oxide restorations.

NexxZr® T Coloring Liquid
- Coloring liquids for NexxZr T white restorations by means of dipping infiltration before the sintering process
- Coloring liquids for dipping infiltration in 16 A–D tooth shades

NexxZr® Effect Coloring Liquid
- Effect liquids for NexxZr T white and NexxZr + white restorations by individual shade infiltration in shades brown, blue, grey and violet as well as incisal enhancer.

Material Composition

Chemical composition	NexxZr Effect Coloring Liquid		NexxZr T Coloring Liquid
	Brown, Grey, Violet	Blue, Incisal Enhancer	
Coloring Pigment	< 4%	< 8%	< 4%
Water	< 96%	< 92%	< 96%
Nitric Acid	< 1%	< 1%	< 1%

Indications
NexxZr Coloring Liquids are ready-to-use solutions to color unsintered indirect restorations (crowns and bridges) made of NexxZr T and NexxZr + by means of infiltration technique.

Contraindications / usage restrictions
Any other use not listed in the indications.

General notes on handling
Please verify delivery immediately upon receipt with regard to:
- Integrity of the packaging
- Integrity of the product (clear liquid without cloudiness or sedimentation)
- The presence of the Sagemax Bioceramics as manufacturer on the packaging as well as the presence of the CE marking.
- By using the coloring liquids more than once please ensure that no contamination or evaporation of the liquids have occurred.

NexxZr Liquids are best stored:
- in the original packaging.
- at temperature between 2 and 28 °C (36 and 83 °F)
- protected from direct sunlight

When handling NexxZr Liquids, the following points should be observed:
- The restoration must be free of dust, grinding residue, and other contaminants
- Do not dilute the Coloring Liquids.
- The Coloring Liquids must not be contaminated.
- The Coloring Liquids have to be sealed when not in use.
- If there is cloudiness, the Coloring Liquids should no longer be used. Contamination promotes cloudiness (precipitation) or sedimentation of the Coloring Liquids.

– Do not decant and/or store the Coloring Liquids in metal containers. In general, contact with metal must be prevented.
– NexxZr Effect Liquids are applied with a clean, metal-free brush on the restoration.
– The liquids must be shaken well before use.

Needed tools for coloring and infiltration are:
– Plastic box for infiltration
– Brush
– Plastic tweezers

General notes on milled NexxZr restorations
– The restoration must be free of dust and grinding residue.
– Restorations fabricated by means of wet processing have to be completely dried before infiltration.
– Infiltrated restorations must be completely dried before sintering.
– General recommendation for the final shade result: Staining technique to be applied for the final shade match. Use a system suitable for zirconia restorations and follow the manufacturer's IfU.

Warnings
– The usual increased care and hygiene required when handling chemicals must also be applied when handling the coloring liquids.
– Prevent direct bodily contact (skin, lips etc.) particularly in case of an allergy to one of the ingredients.
– After accidental skin contact, rinse with plenty of water.
– After eye contact, immediately rinse with plenty of water whilst holding the eyelid open and consult a physician.
– We recommend wearing gloves, protective goggles and suitable protective clothing.
– NexxZr T, + and Effect Coloring Liquids may cause stains on clothing and other surfaces.

Coloring Techniques – Overview

Option A

Infiltration / dipping process
1. Dip milled and cleaned zirconia restoration complete into the filled box with NexxZr coloring liquid.
2. Ensure the respective dipping time to reach the desired color.
3. Rinse with distilled water for 3 sec.
4. Dry with paper towel.
5. Ensure final drying before sintering.

Option B

Brush technique and infiltration / dipping process
1. Apply NexxZr Effect colors with the brushing technique to mimic the natural tooth.
   a. Incisal effects may be achieved by the one-time application of shades blue, brown, violet or grey using a brush.
   b. Additional incisal effects may be achieved by applying NexxZr Effect incisal enhancer.
2. Dip the milled and cleaned zirconia restoration complete into the filled box with NexxZr coloring liquid.
3. Ensure the respective dipping time to reach the desired color.
4. Rinse with distilled water for 3 sec.
5. Dry with paper towel.
6. Ensure final drying before sintering.

Dipping time

Color	Dipping time NexxZr T in sec
A1	20
A2	20
A3	20
A3.5	20
A4	20
B1	20
B2	20
B3	20
B4	20
C1	20
C2	20
C3	20
C4	20
D2	20
D3	20
D4	20

Please note:
Depending on the size and thickness of the NexxZr zirconia restorations (e.g. bridges and implant retained suprastructures) the dipping time and final drying time of the infiltrated restoration can vary.

Final Drying

NexxZr zirconia restorations infiltrated with NexxZr Coloring Liquid have to be dried before sintering. Sintering while moist should be avoided since it can lead to unwanted shift in shade and affect the sintering process. Either an infrared lamp or a drying cabinet may be used for drying. The drying time depends on the temperature and the size of the object /restoration. Low temperatures and large objects extend the drying process. Drying at temperatures above 140°C/284 °F may result in defects.

Sintering

Please use the following sintering program according to the NexxZr IfU:

	Number of units	Duration (h)	Phase	Temperature		Heating rate / Cooling rate		Holding time (min)
				°C	°F	°C/min	°F/min	
Standard	5 - 10	~5.2	Phase 1	20 – 1300	68 – 2372	30	86	60
			Phase 2	1300 – 1530	2372 – 2786	40	107	120
			Phase 3	1530 – 900	2786 – 1652	15	59	–
			Phase 4	900 – 80	1652 – 176	20	68	–
Long	1 - 20	~10.8	Phase 1	20 – 900	68 – 1652	10	50	10
			Phase 2	900 – 1530	1652 – 2786	3	37	150
			Phase 3	1530 – 80	2786 – 176	8	46	–
	>21	~12.8	Phase 1	20 – 900	68 – 1652	10	50	10
			Phase 2	900 – 1530	1652 – 2786	3	37	210
			Phase 3	1530 – 80	2786 – 176	8	46	–
Over-night	unlimited	~14.3	Phase 1	20 – 250	68 – 482	2	35	–
			Phase 2	250 – 1530	482 – 2786	4	39	240
			Phase 3	1530 – 80	2786 – 176	8	46	–

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Manufacturer:
Sagemax Bioceramics, Inc.
34210 9th Avenue S, Ste. 118
Federal Way, WA 98003 USA
Tel. : +1 253-214-0389
support@sagemax.com
www.sagemax.com

EC REP

EC Representative:
AB Ardent
Generatorgatan 8
SE-19560 Arlandastad Sweden
Tel.: +46 8594 412 57
eu1@sagemax.com
www.sagemax.com

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