

Zr Phidia®

by phibo<sup>φ</sup>



**Phidia®**

High Translucency Monolithic Multilayer and Monochromatic Zirconia

# New Zr Phidia®

- + BIOCOMPATIBILITY
- + AESTHETICS

- + RESISTANCE
- + \_\_\_\_\_



The new Phidia® by Phibo® has all of the benefits of ceramics, mainly biocompatibility and aesthetic appearance, coupled with increased mechanical resistance and high translucency. Through the two

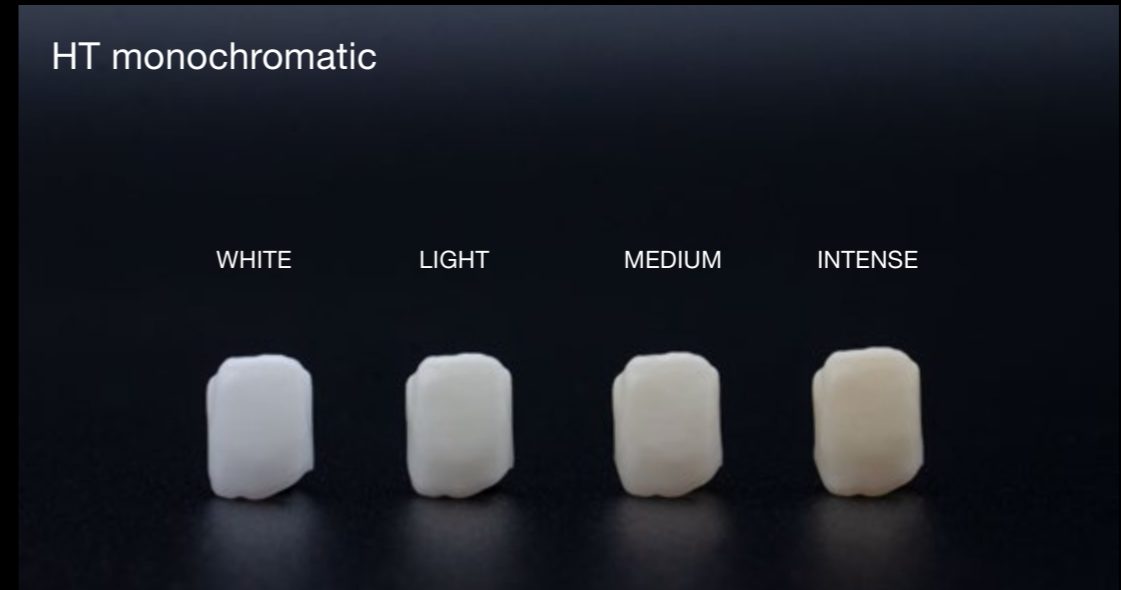
materials that we offer, **High Translucency Multilayer and Monochromatic Zirconia**, Phibo® ensures that practitioners get the best results from their work.

*See the scientific studies in the references section.*

# Range of colours

TABLE OF COLOURS		
MATERIALS	COLOURS	OPTIONS
HT MULTILAYER	A1	
	A2	
	A3	
	B1	
	C2	
HT MONOCHROMATIC	WHITE	-
	LIGHT	A1, A2, B1, B2, C1
	MEDIUM	A3, B3, B4, C2, C3, D2, D3, D4
	INTENSE	A3.5, A4, C4

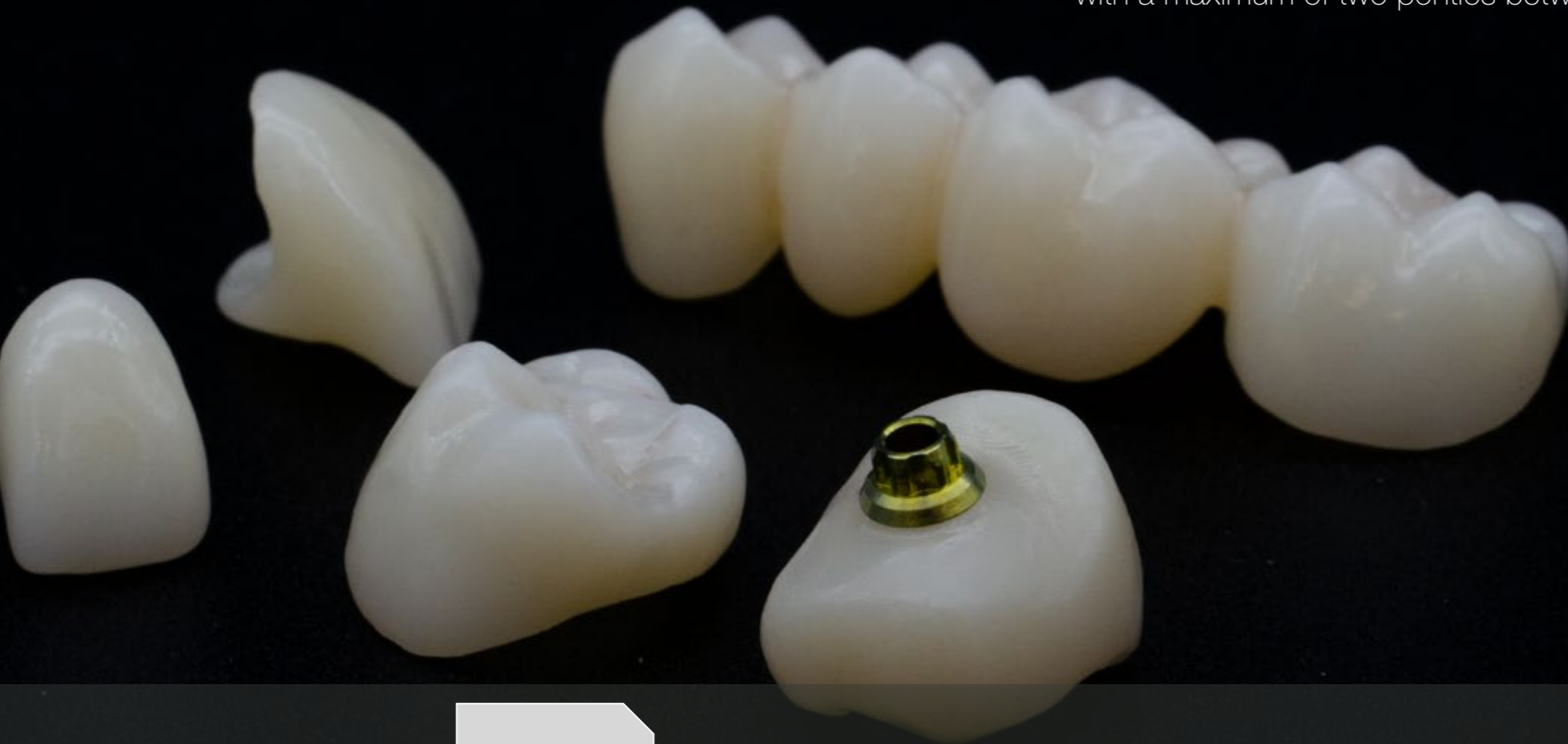
Both materials are available in cement-retained and screw-retained restorations (with Titanium base).



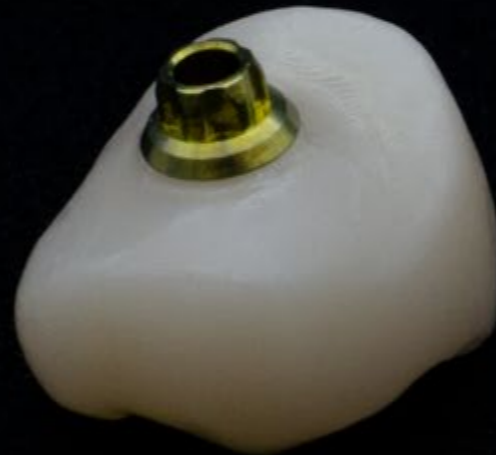
# Indications

**Phidia® Multilayer** can be used for structures with up to 4 units in the rear section, including molars, with a maximum of one pontic between stumps/abutments or up to 6 units on stumps in the front section.

As for the **Phidia® Monochromatic material**, structures can be built with no limit to the number of units, including molars, with a maximum of two pontics between stumps/abutments.



# Properties and composition



PROPERTIES		
PROPERTY	MONOCHROMATIC ZIRCONIA	MULTILAYER ZIRCONIA
DENSITY (g·cm <sup>-3</sup> )	> 6.0	> 6.0
FLEXURAL STRENGTH (MPa)	1200	≥ 800
C. OF THERMAL EXPANSION (K <sup>-1</sup> )	10.5·10 <sup>-5</sup>	10·10 <sup>-6</sup>
YOUNG'S MODULUS (GPa)	> 200	> 210

CHEMICAL COMPOSITION - MONOCHROMATIC	
Element	Mass %
ZrO <sub>2</sub> +Hf <sub>2</sub> O <sub>3</sub> +Y <sub>2</sub> O <sub>3</sub>	≥ 99
Y <sub>2</sub> O <sub>3</sub>	< 6
Al <sub>2</sub> O <sub>3</sub>	≤ 0.15
Other oxides	< 0.15

CHEMICAL COMPOSITION - MULTILAYER	
Element	Mass %
ZrO <sub>2</sub> +HfO <sub>2</sub>	≥ 90
Y <sub>2</sub> O <sub>3</sub>	< 10
Al <sub>2</sub> O <sub>3</sub>	< 0.1
Other oxides	< 0.15

# Scientific references

**[Har16]** Husain Harianawala, Mohit Kheur, Supriya Kheur, Tania Sethi, Abhilasha Bal, Murtuza Burhanpurwala, Farhath Sayed, Biocompatibility of Zirconia. Journal of Advanced Medical and Dental Sciences Research, May/Jun 2016.

**[Loa16]** Alexis Ioannidis, Andreas Bindl, Clinical prospective evaluation of zirconia-based three-unit posterior fixed dental prostheses: Up-to ten-year results. Journal of Dentistry 47 (2016) 80-85.

**[Nae15]** Nadja Naennia, Andreas Bindl, Caroline Sax, Christoph Hämmerle, Irena Sailer. A randomized controlled clinical trial of 3-unit posterior zirconia-ceramic fixed dental

prostheses (FDP) with layered or pressed veneering ceramics: 3-year results. Journal of Dentistry 43(2015) 1365-1370.

**[Nae18]** Nadja Naennia, Andreas Bindl, Caroline Sax, Christoph Hämmerle, Irena Sailer. Aging resistance, mechanical properties and translucency of different yttria-stabilized zirconia ceramics for monolithic dental crown applications. Dental Materials 34 (2018) 879-890.

**[Ört12]** Anders Örtorp, Maria Lind Kihl, Gunnar E. Carlsson. A 5-year retrospective study of survival of zirconia single crowns fitted in a private clinical setting. ScienceDirect (2012).