

Essentia™

Aesthetics  
brought back  
to essentials



GC



# Essentia™ recognises that the age of teeth determines shade

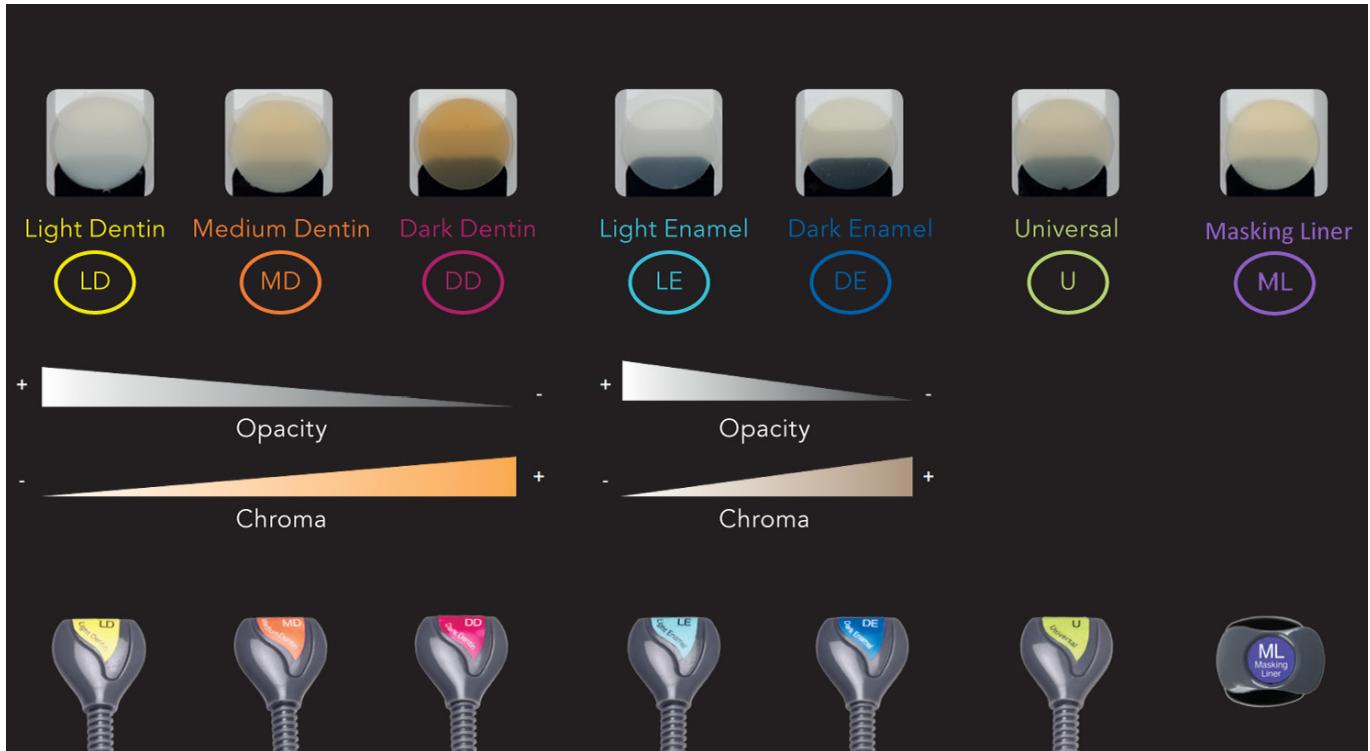
**A dramatic simplification of shade design is possible** if we observe the natural ageing of teeth. Younger teeth have little chroma and high opacity, while older teeth have high chroma and lower opacity. This intuitive observation is captured in the simplified Essentia™ shade range and is the foundation for the Essentia™ Universal composite system.

**3 Dentine shades** (Light, Medium and Dark) define shade “intensity” with increasing chroma and decreasing opacity to match the ageing of dentine.

**2 Enamel shades** (Light, Dark) define the subtle ageing of enamel and provide high reflection and translucency to complete the bi-layer Essentia™ restorations.



# The Essentia™ system. Could it be any easier?



The range of **dentine** shades varies in both chroma and opacity, starting with a young and low chroma opaque dentine (Light Dentin), followed by a medium opacity medium chroma dentine (Medium Dentin) and ending with a higher translucent high chromatic dentine (Dark Dentin). Thus following the natural ageing of real dentine.

**Enamel** shades are naturally opalescent, with a more opaque, high value and low chroma enamel (Light Enamel) and a more transparent, low value and slightly chromatic enamel (Dark Enamel).

**Universal** is a body shade with incredible shade matching ability for small anterior cavities or single shade restorations in the posterior region.

**Masking Liner** is an opaque, heavily-filled injectable composite that will block discolouration without increasing value.

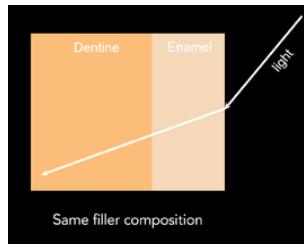
# Essentia™ recognises that dentine and enamel react differently to light

**Essentia™** introduces a new paradigm in composite filler design with recognition that the filler structures of dentine and enamel shades should be different, so they can more effectively replicate the complexities of light movement through dentine, enamel and the dentine enamel junction (DEJ)



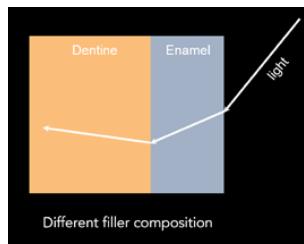
Prof Marleen Peumans, Belgium

**A typical composite has the same filler composition** in its Dentine, Body, Enamel, Translucent and Incisal shade ranges. Multiple layering is therefore required to fulfil aesthetic expectations.

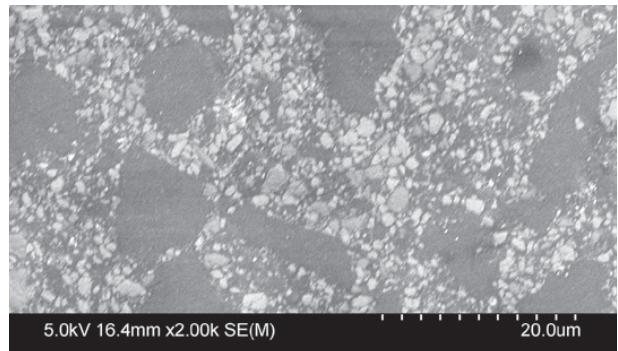


**Essentia™ shades are structurally different.**

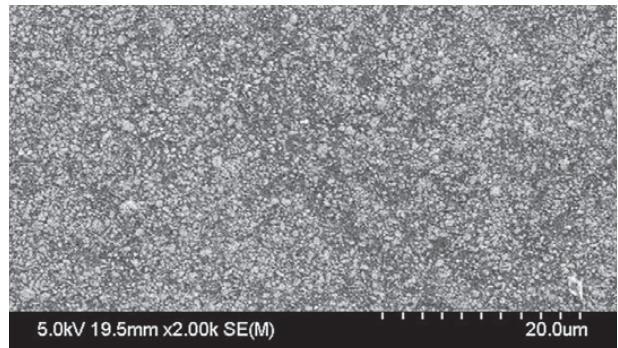
Combined in a bi-layer technique, they mimic the optical properties of dentine, enamel and the DEJ to elevate the aesthetics, while simplifying the layering process.



**Dentine shades** feature a diverse range of fillers, with wide light-scattering ability to ensure blending with surrounding dentine.



**Enamel shades** feature ultrafine, high density fillers that give exceptional strength, polish and wear resistance.



# Perfect class IV restorations with only 2 shades

## Step 1. Shade selection based on age



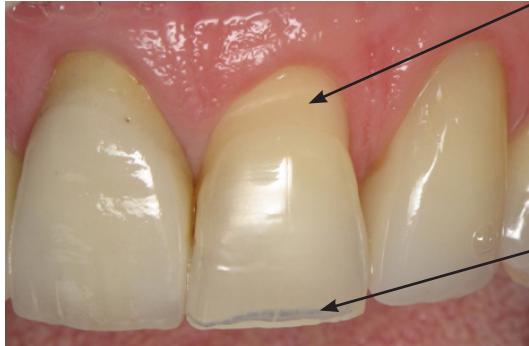
Build the Enamel shell



Create the Dentine structure



Complete with Enamel



Dr Graeme Milichich

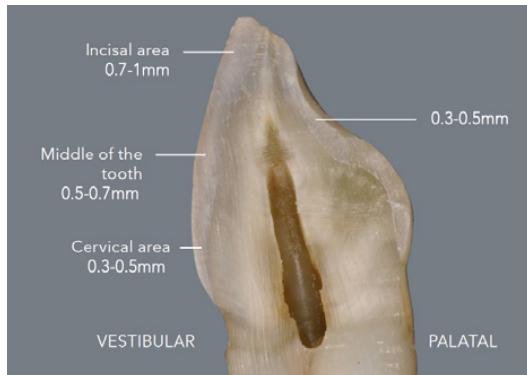
Select your dentine shade looking at the cervical area: Light, Medium or Dark.



Select your enamel shade looking at the incisal border: Light or Dark.



## Step 2. Deciding the thickness of enamel



Prof Marleen Peumans, Belgium

The principle behind Essentia™ is to mimic natural tooth structure. Therefore, the best guide to determining your enamel thickness is to follow the thickness variations found in natural teeth.

Please note that these thicknesses are indicative and may vary based on each patient's tooth anatomy and age.

# Shade selection techniques with Essentia™

## Custom shade guide technique

Each Essentia™ STARTER KIT contains a Bio-emulation™ custom-eyes shade guide, that allows for the quick preparation of histo-anatomical layered shade tabs to build a custom shade guide made of the Essentia™ composite.



Using the custom shade tabs, a shade match is easily achieved from the 6 shade options, which cover virtually all your clinical requirements

Anterior restorations are adapted to the age of the patient. Posterior restorations can be completed in either a bi-layer or mono-layer technique.

## Composite Button technique

Small amounts of composite are applied to the teeth and light-cured (without bonding agent). Enamel shades are placed at the incisal border, while Dentin shades are placed towards the cervical third. By visualising through a polarising filter shade selection becomes even more evident and easier.

**Tip!** To select Enamel shades, placing the composite buttons on top of old restorations or areas to be replaced is not optimal, as their shade is not necessarily accurate. The most precise way to select Enamel shades is to use adjacent teeth and place the buttons as an extension of the incisal edge.



Dr Javier Tapia Guadix

# Essentia™ MODIFIER KIT – Finishing touches



Crack line characterisations are made with a scalpel and Red Brown Modifier for the central stained crack (all other crack lines remain non-stained).

Dr Javier Tapia Guadix



A completed Essentia™ restoration, featuring Opal Modifier applied to mamelons and proximal spaces. A blue incisal halo is visible with reflected light and an orange/red halo is seen with transmitted light.

Dr Javier Tapia Guadix



**Red Brown Modifier;** a flowable consistency stain to add chroma to specific areas, or mixed with Black for fissure or crack staining.



**Black Modifier;** a flowable consistency stain for mixing with Red Brown for fissure and crack stains, or to decrease value.



**Opal Modifier;** a true opalescent transparent enamel shade in a paste consistency for mimicking incisal halo effects.



**White Modifier;** a flowable consistency stain for white spots, decalcifications and to increase value.

# Essentia™ clinical cases



Dr Fadi Yassmin



Dr Clarence Tam



Dr Anthony Mak



Dr Anthony Mak

# Essentia™ clinical case: direct composite veneers



Before



Preparation



Etch, bond application

Silicon key forms palatal shelf with **LE**Dentine and mamelons with **LD****OM**; Opal Modifier over mamelons**LE** to form buccal enamel

Rubber points



Goat hair brush with diamond paste



After

# Q&A

## 1. What are the key benefits of using Essentia™?

- Essentia™ makes layering simpler and faster. An elevated level of aesthetics can be efficiently achieved using Essentia™ in a bi-layer technique.
- The shade concept of Essentia™ is innovative but also intuitive. By matching the aging of dentin and enamel, the shade selection becomes easier.
- The Enamel shades of Essentia™ feature the latest technology filler composition which gives high strength and exceptional aesthetics yet is also easy to polish with excellent gloss retention.
- The difference of filler composition between Essentia™ Enamel and Dentine shades allows light to behave in a very natural way mimicking tooth structure and ensuring a high level of aesthetics.

## 2. Which Bonding system is recommended with Essentia™?

Essentia™ can be used with any bonding system. However, it is often preferable to use a composite and bonding agent from the same brand, as they have been tested together during their development. G-BOND, G-aenial Bond and G-Premio BOND are three modern adhesives from GC.

## 3. Why has a variation in handling characteristics been created with shades of Essentia™?

Handling has been adapted to indications and use of each shade:

### Dentins

The handling is smooth and sculptable, to allow easy build-up and shaping of anatomical elements in dentine.

### Enamels & Opal Modifier

The handling is made slightly dense, which is needed in the composition to obtain the final external hardness and gloss retention.

### Universal

The handling of the Universal is more compact, perfect for use in posterior restoration and for small cavities.

### Masking Liner

The Masking Liner is injectable, so it will wet and adapt well to the base of cavities and is suited to placement in very thin layers.



## Q&A

### 4. How do you suggest masking the transition line in class IV restorations?

In cases where Light Dentin is used, the opacity is sufficient to mask the transition line.

In cases where Medium Dentin or Dark Dentin are used and there is minimal space for the dentin layer, first use a masking liner or very small layer of Light Dentin to provide enough opacity to mask the preparation line.

If the cavity is large, the opacity of the Dentin shades will be enough for a natural result. If you would like to increase the opacity, you can apply a first layer of Masking Liner or Light Dentin underneath the following Dentin shade.

### 5. Does Essentia™ Contain Bis-phenol A or Bis-GMA?

Essentia™ does NOT contain Bis-phenol A. Essentia™ Enamel shades & Opal Modifier contain Bis-GMA. Essentia™ Universal, Light, Dark Enamel, Opalescent Modifier and Masking Liner contain Bis-EMA.

#### Notes:

- Studies have shown that Bis-GMA does not degrade into BPA intra-orally.
- Ethoxylated Bisphenol-A dimetacrylate (also called Bis-EMA, which is not the same as Bisphenol A) cannot be hydrolysed into BPA, nor be detected in patients' saliva after treatment with Bis-EMA containing resins.

### 6. What are the physical properties of Essentia™?

	Essentia™ Enamel	Essentia™ Dentin	Essentia™ Universal
Flexural strength [MPa]	137	108	118
E-module [GPa]	8.8	6.4	8.2
Working time [sec.]	220	240	120
Shrinkage [vol%]	2.55	2.42	2.28
Shrinkage stress [MPa]	0.91	0.61	0.59
Compressive strength [MPa]	376	306	355
Radiopacity [AI%]	291	142	252

### 7. What is the % filler content of Essentia™?

	% Filler by Weight	% Filler by Volume
Essentia™ Dentins	76%	63%
Essentia™ Enamels	81%	65%
Essentia™ Universal	81%	65%
Essentia™ Masking Liner	69%	50%

# Elevate your esthetics through simplicity



## Essentia™ Starter Kit Syringe

7 syringes, 1 of each shade: LD, MD, DD, LE, DE, U, ML  
20 dispensing tips  
Shade guide kit and tab holder  
Accessories



## Essentia™ Syringe Refill

2mL syringe refill in shades: LD, MD, DD, LE, DE, U, OM  
2mL syringe refill ML with 20 dispensing tips  
2.4mL syringe refill Modifier shades: RBM, BM, WM



## Essentia™ Starter Kit Unitips

30 unitips: 5 unitips each in 6 shades: LD, MD, DD, LE, DE, U  
1 syringe ML  
20 dispensing tips  
Shade guide kit and tab holder  
Accessories



## Essentia™ Unitip Refill

Refill (15 unitips, 0.16mL each) in shades: LD, MD, DD, LE, DE, U



## Essentia™ Modifier Kit

4 syringes: OM, BM, WM, RBM



## Essentia™ Clinical Guide



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