



**müller-  
omicron**  
DENTAL



**Aqium<sup>®</sup> 3D**

**perfected the Impression!**

**NEW  
VISCOSITIES!**

HYDROPHILICITY

SCANNABILITY

TEAR STRENGTH

VISCOSITIES

ULTIMATE  
ELONGATION

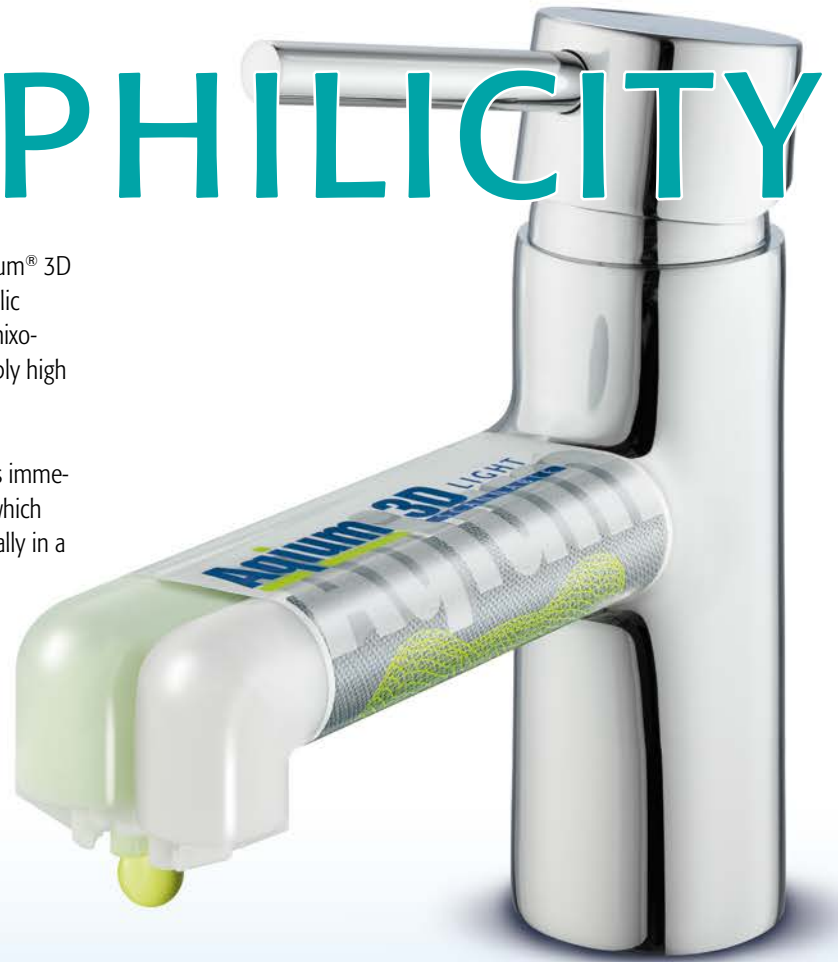
HOMOGENEITY

# Aqium® 3D HYDROPHILICITY

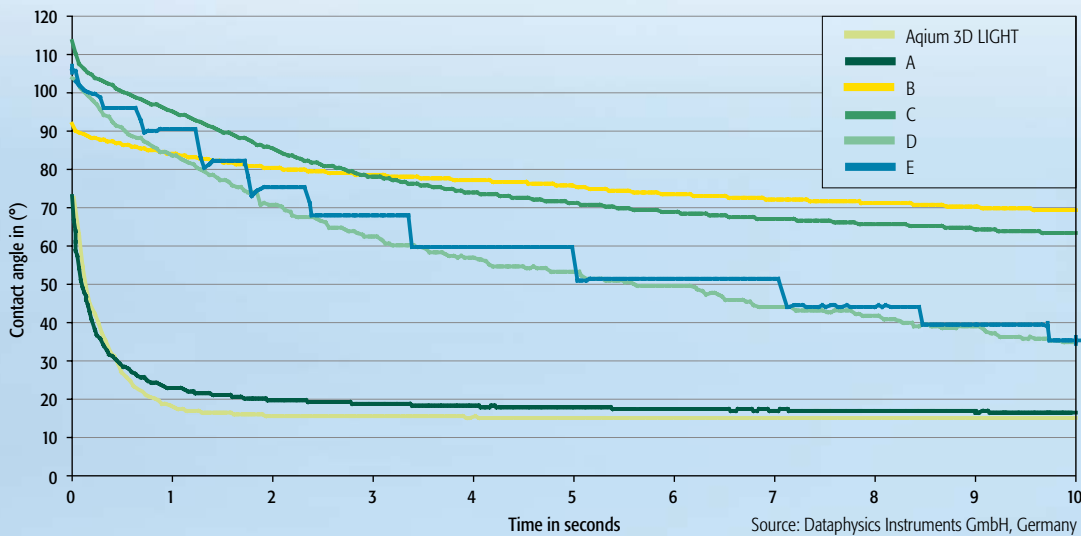
The overall system as well as the individual components of the Aqium® 3D are perfectly co-ordinated with one another regarding the hydrophilic properties, ultimate elongation, tear strength, flow characteristics, thixotropy, viscosity and colour contrast. And thus render an incomparably high performance of the complete system that is unequalled.

Particular emphasis should be given to the light component with its immediate ready use effect of the strongly impressed hydrophilicity, which is ultimately responsible for the precision of the impression, especially in a moist environment.

The most used method to define the hydrophilicity is the measurement of the contact angle (the lower the angle the better the hydrophilicity). A benchmark test with other leading VPS materials, done by an external institute, shows the extra ordinary performance of Aqium® 3D LIGHT. Directly after application the drop loses its contour. Already after 2.1 sec. Aqium® 3D LIGHT achieves the lowest contact angle.



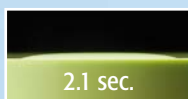
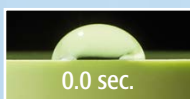
Measurement of contact angle on cured impression material (VPS-Light bodies)



## Pronounced Thixotropy / Excellent Flowability



Aqium® 3D LIGHT displaces existing humidity and flows bubble free onto the preparation and stays in that position. Under the dynamic pressure of the tray material, e.g. Aqium® 3D HEAVY, the perfect fluidity unfolds.



Videoequenz on the homepage [www.mueller-omicron.de](http://www.mueller-omicron.de)

// The excellent hydrophilic properties, which are rather unusual for a-silicones, must be highlighted."

Senior Physicians Dr. med. dent. Jens Wehle (Dep. of Prosthodontics of the ZMK Centre, Universitätsmedizin Göttingen)



# Aqium® 3D TEAR STRENGTH

With Aqium® 3D it is succeeded to achieve a high initial hydrophilicity and simultaneous a high ultimate elongation and tear strength. Usually these important mechanic specific values will be reduced more the higher the hydrophilic property is adjusted. Lower values cause a tear of the material during the removal out of the patient's mouth and the impression must be repeated.

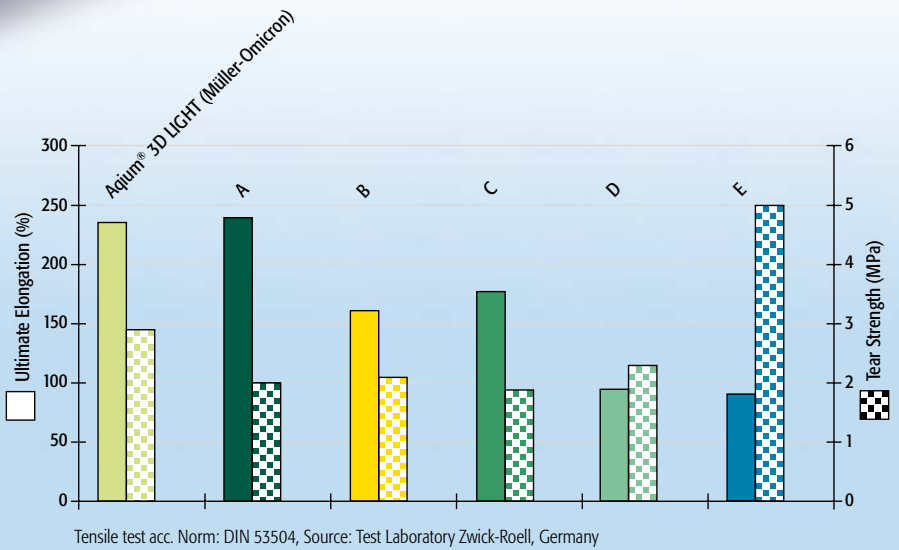
Aqium® 3D offers safety herein and takes, in this combination, a leading position in the dental market.



“The material's ability to take a good impression due to its high elasticity also increased comfort for the patients.”

Senior Physicians Dr. med. dent. Matthias Rödiger  
(Dep. of Prosthodontics of the ZMK Centre, Universitätsmedizin Göttingen)

A comparison with other leading VPS-materials shows that, in spite of the best hydrophilicity, Aqium® 3D LIGHT obtains the second best single value. In the markedness of the single values and in correlation among each other Aqium® 3D LIGHT is the best performer and overall winner of the comparison.



**Score-model:** (single valuation: possible maximum points 10; Overall performance: addition of the realized points per single valuation)

Product	Hydrophilicity (max. 10 Points)	Ultimate Elongation (max. 10 Points)	Tear Strength (max. 10 Points)	Overall Performance (max. 30 Points)	Ranking
<b>Aqium® 3D LIGHT</b>	<b>10</b>	<b>10</b>	<b>6</b>	<b>26</b>	<b>1.</b>
A	10	10	3	23	2.
E	2	1	10	13	3.
B	2	6	4	12	4.
C	1	7	3	11	5.
D	3	1	4	8	6.

The named products Flexitime® Light Flow, Aquasil Ultra LV, Honigum® Light, Express™ Light Body, AFFINIS® light body are no products of Müller-Omicron GmbH Co. KG.

# Aqium® 3D ULTIMATE ELONGATION

## Clinical Case



Fig. 1: Preparation of abutment tooth 36 for a full-cast part crown with cord packing.



Fig. 2: Light Body Aqium® 3D application in the distal approximal region of abutment tooth 36 (pilot cords remain in situ).



Fig. 3: Light Body Aqium® 3D application over the entire occlusal surface of the mandible.



Fig. 4: Filling the impression tray with Aqium® 3D Heavy Body compound and thinner Aqium® 3D Light Body overlay.



Fig. 5: Positioning and fixing the impression tray in the patient's mouth.

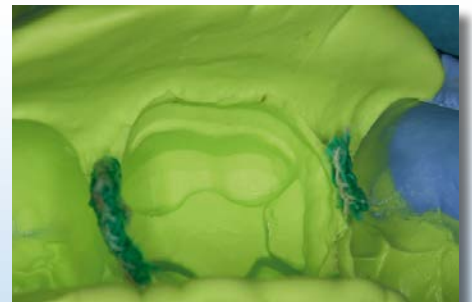


Fig. 6: Detail of the cast of abutment 36 after using the double cord technique with the pilot-retraction cord retained in the impression.



Fig. 7: Overview of the mandibular impression.



Fig. 8: Detailed picture of saw cut model made.



Fig. 9: Full cast partial crown inserted with optimum marginal seal.

**// Our results seem to indicate that the Aqium® 3D Light / Aqium® 3D Heavy combination can be recommended for use in addition because it is convenient to use and yields a high quality result."**

# Aqium® 3D SCANNABILITY

// The scanning capability was considered very good.

The ability to adequately digitise impressions, made of Aqium® 3D, using scanning methods is an additional advantage which will become more important in the future as part of the "digital workflow".

Senior Physicians Dr. med. dent. Matthias Rödiger  
(Dep. of Prosthodontics of the ZMK Centre, Universitätsmedizin Göttingen)



During the development of the Aqium® 3D the requirements of the progressive digital dentistry were taken in account. The impressions, which were taken in the conventional way with Aqium® 3D, are scannable without the addition of a powder or spray. In this way a computer-assisted production of tooth restorations, based on digital data, will be enabled,

even if a scan directly in the mouth turns out to be problematic caused through difficult situation in the mouth. It is not a mandatory to have a scanner in the dental practice. The impression is dimensionally stable and can be sent to a milling center or dental laboratory, who will carry out all further digital workflow for the production of the dental prosthesis.

## Aqium® 3D and the New Mixing Technology achieve material savings of 28 %

The new NT-Mixer and Aqium® 3D combines quality enhancement and economy in a perfect way. The new mixing method (shear forces and extensional flow) and the perfect adjusted viscosities of Aqium® 3D create a clearly visible better homogeneous mixing result, which increase the safety at the user, as well as the quality of the impression itself. Furthermore the compact design of the new NT-mixing tips achieves automatically material savings of 28 %. That's good for the environment and the budget.



# Aqium® 3D NEW NT-MIXER

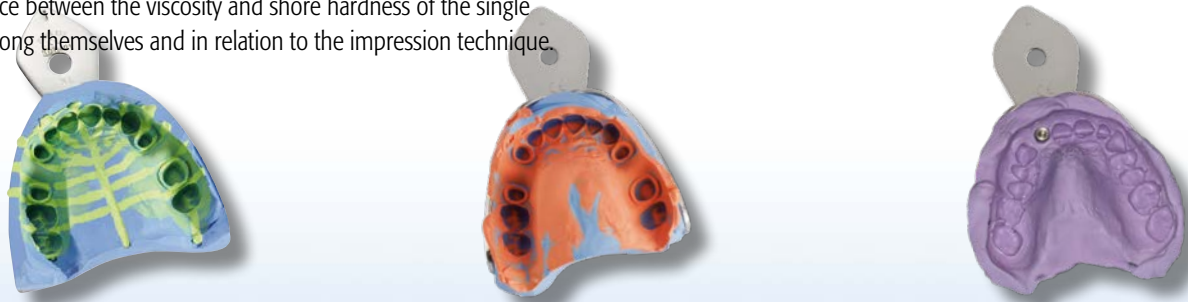
# Aqium® 3D VISCOSITIES

The most frequently used impression techniques, the double mixing technique (1-step) and putty wash technique (2-step), demand a determined viscosity and hardness of the respective material to take a safe and precise impression.

The system Aqium® 3D meets all these requirements at best with an optimum balance between the viscosity and shore hardness of the single component among themselves and in relation to the impression technique.

With the new product type Aqium® 3D PUTTY STANDARD the system now offers more individual combinations of material and an enlargement in the field of indication.

The product range is perfectly completed by the scannable bite registration material Aqium® 3D BITE.



## Recommendation Material Combination / Impression Technique

Tray Material	Wash Material	Putty Wash Technique (2-step)	Double Mixing Technique (1-step)	Monophase Technique
Aqium® 3D PUTTY SOFT	Aqium® 3D LIGHT	★★★★	★★	
	Aqium® 3D MEDIUM	★★	★★★★	
Aqium® 3D PUTTY STANDARD	Aqium® 3D LIGHT	★★★★	★	
	Aqium® 3D MEDIUM	★★★★	★	
Aqium® 3D HEAVY	Aqium® 3D LIGHT	★	★★★★	
	Aqium® 3D MEDIUM	★	★★★★	
Aqium® 3D MONO	Aqium® 3D MONO			★★★★

## Aqium® 3D Product Range

★★★★ = Highly recommended   ★★ = Recommended



- Aqium® 3D PUTTY SOFT: REF 88631 2x 300 ml jars  
REF 85131 2x 380 ml cartridges 5:1
- Aqium® 3D PUTTY STANDARD: REF 88632 2x 300 ml jars
- Aqium® 3D HEAVY: REF 82533 2x 50 ml cartridges + 6 mixing tips  
REF 85133 2x 380 ml cartridges 5:1
- Aqium® 3D LIGHT: REF 82530 2x 50 ml cartridges + 12 mixing tips  
REF 000087270 2x 135 ml tubes
- Aqium® 3D MONO: REF 85139 2x 380 ml cartridges 5:1  
REF 000087279 2x 135 ml tubes
- Aqium® 3D MEDIUM: REF 82531 2x 50 ml cartridges + 12 mixing tips
- Aqium® 3D BITE: REF 82538 2x 50 ml cartridges + 12 mixing tips

- Accessories:
- REF 51291 Fix cap 5:1, yellow, 2 pieces
  - REF 51401 Mixing Tips 5:1, yellow, 40 pieces
  - REF 811511 Mixing Tips NT, yellow, 50 pieces
  - REF 811513 Mixing Tips NT, green, 50 pieces
  - REF 474196 Intra-Oral-Tips, yellow, 96 pieces
  - REF 811010 Mixing Gun NT (1:1/1:2)
  - REF 82005 Mixing Gun (1:1/1:2)

