

# Partial integration of oxygen in GIE® water

Zimmermann  
Amino-comp      Laboratory analysis

GIE® Water  
Examination Number. W 2187  
28.09.2001

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Day the sample was taken: 28.09.2001.  
Location of where the sample was taken: Horb a.N / Germany.  
Description of examined material: Tap water.  
Sample taker: Rolf Zimmermann.  
Our sample number: W 2187.  
Age of examined material: Production on site with the GIE® Water Activation Device.

## Tested device:

GIE® Water Activator  
Model 1000

With oxygen enrichment, before the water entrance, loaded with medical oxygen. Oxygen quantity was 12 litres/minute at a pressure of 3.5 bar. Water flow 13 litres/minute at a pressure of 5 bar.

## Analysis method

Determination of the partial linking of the oxygen in water.

## Explanation

The lesser the evaporation of oxygen in the water, the greater the partial oxygen linking in the water. In other words, the cluster structures in the water (H<sub>2</sub>O molecules) must have more cavities than oxygen which can be linked in these cluster structures. This also has to do with the ionisation of the water.

## Experiment construction

Measuring instrument: OXY 300 from the company WTW with automatic oxygen compensation which has been calibrated.

Laboratory glass: 600 ml; 90 mm of diameter, material Duran DIN 12331.

Room temperature: 20°C ; regulation of temperature regulator +/- 0.2°C.

Hourly measurements: table - Timer company Roth.

Micro-processor driven mover: Eurostar digital with sheet mover made of borosilicate glass - 150 U/minute.

Measurement intervals: 10 measurements. Reproducibility: 15 samples of each variant were examined.

## Test parameter

Oxygen content of GIE®-Oxygen Water in mg/litre just after production      35.4 mg/litre at 18.5°C  
Conductivity of the original reference water      512 µS/cm at 18.5°C

Average oxygen evaporation per hour	Average numbers	
GIE® Oxygen Water	0.4 to 0.6	mg/litre/h
Levitized Oxygen Water (4 Litre machine with a double rotor)	1.2 to 1.6	mg/litre/h
Oxy-Vital Oxygen Water	9.8 to 11.4	mg/litre/h
„Adelholzner“ Oxygen Water	12.3 to 14.7	mg/litre/h

## Result

The GIE<sup>®</sup>-Oxygen Water showed a capacity of partial linking in of oxygen in water. This has never been previously measured. The difference towards other oxygen waters is highly significant and reproducible at any time.

Laboratory head  
Rolf Zimmermann

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