

VACUUM MIXING AS PART OF MODERN CEMENTING TECHNIQUE

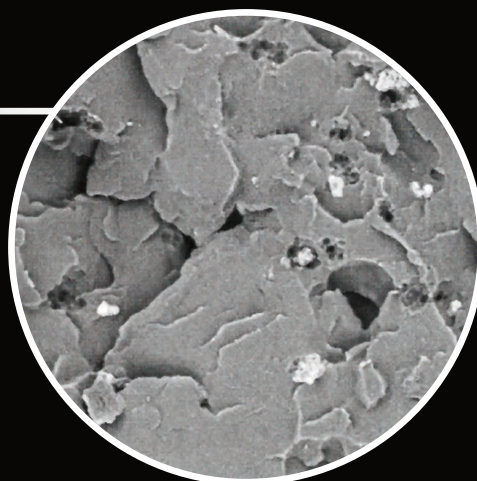
FOR SUCCESSFUL SURGICAL OUTCOME AND STAFF SAFETY

Using modern cementing technique in arthroplasty is key to ensure long survival rates for endoprostheses and a low risk of revision.^{1, 2} One of its crucial success factors is a homogeneously mixed bone cement with reduced porosity.³ Air-induced porosity within the cement mantle can lead to a rapid propagation of fractures, weakening the cement mantle. A fractured and fragile cement mantle compromises the integrity of the interfaces, and therefore the survivorship of the implant.⁴

Vacuum mixing improves cement homogeneity by reducing porosity and strengthens the cement prosthesis interface.⁴ In addition, it reduces the ambient methyl methacrylate (MMA) fumes^{5, 6}, supporting staff safety. The vacuum mixing system PALABOWL® enables standardised mixing of homogeneous bone cement.

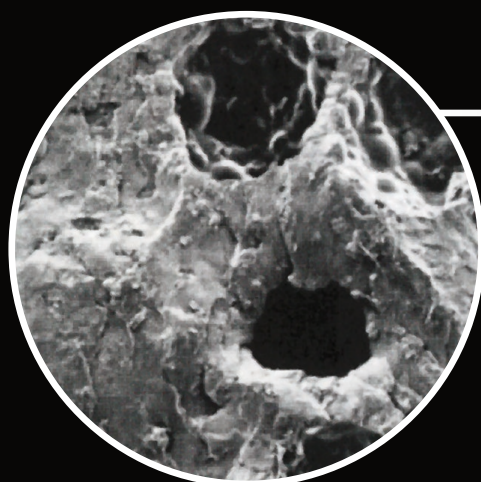
VACUUM MIXING

- porosity of 0.1 – 1 %⁴
- substantially decreases cement-implant-interface void⁷
- increases force required to separate cement and implant and improves fatigue strength⁷
- reduces the longer term risk of revision in THA¹
- reduces MMA fumes^{5, 6}



NON-VACUUM MIXING

- porosity of 5 – 16 %⁴
- weaker cement-implant bond⁷
- decreases the fatigue life of the cement³
- higher MMA fumes exposure⁵



PALABOWL®

QUALITY AND EFFICIENCY IN MIXING



- **High cement quality:**
vacuum mixing reduces porosity, improves cement homogeneity, and strengthens the cement-implant interface⁴
- **Safety:**
vacuum hose with integrated active charcoal filter reduces MMA fumes
- **High capacity:**
mixing of up to three pouches (3x40) of bone cement at a time
- **More output:**
shape of spatula and curette help remove mixed bone cement from the bowl completely
- **Homogenous mixing:**
paddle design with rotating axis supports thorough mixing without unmixed powder collecting at the edges of the bowl
- **Excellent visibility:**
transparent material allows monitoring of the mixing process

Mixing Tip: To ensure even polymerisation and homogeneity, Heraeus Medical recommends to add liquid first to the bowl, then add powder.

Product	Description	Content	REF
PALABOWL®	Vacuum mixing bowl	15	5050166

Simply order from Heraeus.

www.heraeus-medical.com

