



# MOPS®

## Missouri Osteochondral Preservation System

Available exclusively from CONMED through MTF Biologics, MOPS® preservation and storage services create osteochondral allografts with consistently high viable chondrocyte density.<sup>1</sup>



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# More Viable Chondrocytes, Longer Shelf Life

The Missouri Osteochondral Preservation System (MOPS®) helps overcome some of the challenges for osteochondral allograft transplantation.

## The Problem

Studies show that osteochondral allograft transplant procedures have significantly higher success rates when grafts have greater than 70% chondrocyte viability at the time of implantation.<sup>2,3,4</sup>

However, after graft recovery, disease testing and working with the patient to schedule the procedure, there is a very short window of time where sufficient chondrocyte viability in the grafts can be maintained by use of current tissue storage protocols.<sup>2</sup> This puts enormous pressure on patients, surgeons, and facilities, often causing these valuable allografts to go to waste.

## The Solution

### Osteochondral Allografts preserved with MOPS® Technology

MOPS® preservation and storage services create osteochondral allografts that have been shown to maintain more than twice the average viable chondrocyte density for twice as long as allografts preserved and stored using standard tissue bank (SOC) methods.<sup>1,4</sup>

#### Higher Viable Chondrocyte Density<sup>1</sup>

In an initial clinical comparison study, allografts preserved using MOPS® maintained 98.8% viable chondrocyte density at 40 to 55 days of storage, compared to SOC allografts, which maintained only 22.9% viable chondrocyte density at 21 to 28 days after recovery. Importantly, all MOPS-preserved allografts evaluated in the study had higher than the desired minimum essential viability level of 70%, while only 27% of SOC allografts evaluated exceeded the desired viability level at the time of implantation.

	MOPS Allografts <sup>1</sup>	SOC Allografts <sup>1</sup>
Viable Chondrocyte Density	98.8% at 40-55 Days	22.9% at 21-28 Days
Grafts over 70% Viability Threshold	100%	27%

98.8% viable chondrocyte density at 40 to 55 days<sup>1</sup>



DISTAL FEMUR



PATELLA



TALUS

### Longer Shelf Life<sup>1,4</sup>

MOPS-preserved allografts averaged 98.8% viable chondrocyte density at 40 to 55 days<sup>1</sup> – giving surgeons and their patients significantly more time to schedule the surgery. Meanwhile, studies show that mean chondrocyte viability in osteochondral allografts stored using the standard tissue bank protocols was below the minimum essential level by 28 days from the time of recovery.<sup>1,4</sup>

### Lower Revision Rates<sup>1,3,4</sup>

MOPS-preserved allografts are consistently associated with significantly lower revision and failure rates compared to standard-preservation (SOC) allografts in the first 4 years after transplantation.<sup>1,3,4</sup> The consistently high chondrocyte viability in MOPS-preserved grafts at the time of transplantation is considered to be a major factor contributing to these more successful outcomes.

### Minimal Processing

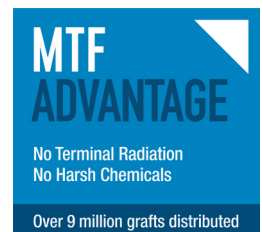
MTF Biologics never uses H<sub>2</sub>O<sub>2</sub>, harmful chemicals, or terminal radiation during allograft processing – instead choosing to minimally process donor tissue to help preserve the allograft's natural biomechanical and restore bone.<sup>5</sup>

### Patient-Matched Grafts

Due to the nature of this very desirable tissue and limited availability, MTF Biologics offers graft matching services specifically designed to provide orthopedic surgeons with the best possible anatomically matched allografts to meet each individual patient's unique needs.

**Osteochondral Allografts preserved with MOPS® Technology from MTF Biologics are available exclusively from CONMED.**

***If you would like more time to schedule an osteochondral allograft transplant procedure and use a graft that has higher viable chondrocyte density, call CONMED at 866.4CONMED to match your patient with a MOPS® graft from MTF Biologics.***



<sup>1</sup>Stoker et al. "Chondrocyte Viability at Time of Transplantation for Osteochondral Allografts Preserved by the Missouri Osteochondral Preservation System versus Standard Tissue Bank Protocol." Journal of Knee Surgery. Volume 31, Issue 8, pp. 772-780, September 2018. <sup>3</sup>Cook et al. "Importance of Donor Chondrocyte Viability for Osteochondral Allografts." The American Journal of Sports Medicine. Vol 44, Issue 5, pp. 1260 – 1268. February 26, 2016. <sup>4</sup>Rucinski et al. "Effects of Compliance With Procedure-Specific Postoperative Rehabilitation Protocols on Initial Outcomes After Osteochondral and Meniscal Allograft Transplantation in the Knee". The Orthopaedic Journal of Sports Medicine, Volume 7, Issue 11. November 2019. <sup>5</sup>Stannard, James P., and James L. Cook. "Prospective Assessment of Outcomes After Primary Unipolar, Multisurface, and Bipolar Osteochondral Allograft Transplantations in the Knee: A Comparison of 2 Preservation Methods." The American Journal of Sports Medicine, Mar. 2020. <sup>6</sup>Maletis GB, Inacio MC, Funahashi TT. Risk factors associated with revision and contralateral anterior cruciate ligament reconstructions in the Kaiser Permanente ACLR registry. Am J Sports Med. 2015 Mar;43(3):641-7.



Recognizing exemplary and innovative products to treat sports injuries, MOPS® was awarded the Sports Medicine Technology Award from Orthopedics This Week in 2018.

## Ordering Information

Description	Qty	Catalog Number
MOPS Bi-Compartment Lateral Right OC	1	MOPS92
MOPS Bi-Compartment Medial Right OC	1	MOPS93
MOPS Bi-Compartment Lateral Left OC	1	MOPS94
MOPS Bi-Compartment Medial Left OC	1	MOPS95
MOPS Fem Condyle Med Left OC	1	MOPS96
MOPS Fem Condyle Lat Left OC	1	MOPS97
MOPS Fem Condyle Med Right OC	1	MOPS98
MOPS Fem Condyle Lat Right OC	1	MOPS99
MOPS Distal Femur Left OC	1	MOPS24
MOPS Distal Femur Right OC	1	MOPS25
MOPS Humeral Head Left	1	MOPS11
MOPS Humeral Head Right	1	MOPS12
MOPS Patella Left OC	1	MOPS15
MOPS Patella Right OC	1	MOPS16
MOPS Left Ankle OC	1	MOPS41
MOPS Right Ankle OC	1	MOPS42
IMOPS Tibial Plateau w/Meniscus Left OC	1	MOPS54
MOPS Tibial Plateau w/Meniscus Right OC	1	MOPS55
MOPS Femoral Head, Left	1	MOPS60
MOPS Femoral Head, Right	1	MOPS70
MOPS Tibia Distal, Left OC	1	MOPS28
MOPS Tibia Distal, Right OC	1	MOPS29
MOPS Talus, Right	1	MOPS27
MOPS Talus, Left	1	MOPS26

