

# KOS

**The microwave multifunctional tissue processor  
you were waiting for.**

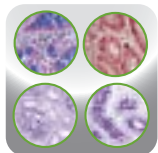


- Tissue processing
- Decalcification
- Special stains
- Fixation
- Gross hardening
- Antigen retrieval

In a fraction of the time



**MILESTONE**

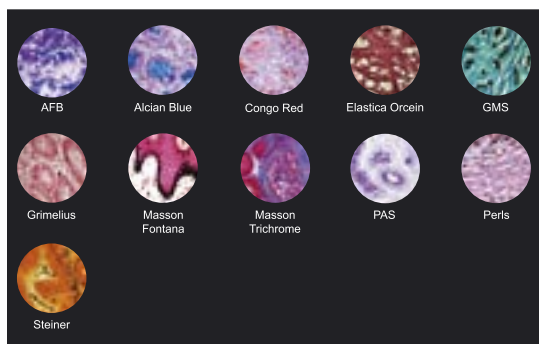


## Special Stains

### Up to 76% time saving for histochemical staining protocols

Several time consuming staining procedures are enhanced by microwave irradiation. Factory stored, optimized, step by step protocols for most common stains for 1-40 slides. Preset or customized programs guarantee operator independent, consistent results.

- No splashing, constant pH conditions
- Magnetic stirring for temperature uniformity along the entire length of the slides



#### Stains

GMS (Fungi)  
GRIMELIUS (Agryrophil)  
MASSON TRICHROME  
MASSON FONTANA  
PAS  
ALCIAN BLUE  
ZIEHL NIELSEN  
ELASTICA (ORCEIN)  
PEARLS IRON STAIN

Standard (minutes)	KOS (minutes)	Time Saving %	Staining intensity
130	25	76	Increased
65	13	72	Increased
120	32	70	Increased
80	19	70	Increased
50	21	50	Increased
34	13	61	Increased
39	11	61	Increased
30	7	62	Increased
21	8	46	Increased

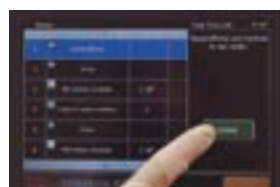
^ Note: Times include non-microwave treatment steps



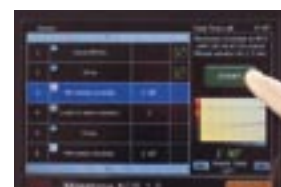
Select stains menu



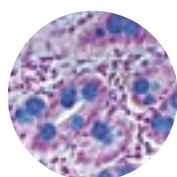
Select specific stain



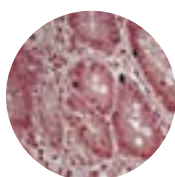
Follow the step by step screen indications



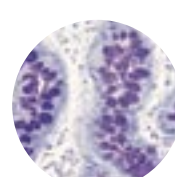
Microwave programs are pre-stored



Alcian Blue:  
Bowel biopsy,  
x 400.



Grimelius Argyrophyl  
cells in Duodenum,  
x 400.



PAS,  
stomach gland,  
x 400.



## Time at temperature steps/Antigen retrieval



- 1 Select temperature
- 2 Select histomodule
- 3 Select time
- 4 Press GO.



User's programs can be easily set up and stored under "Favorites" for easy operation

# KOS\* Smart and Fast

\*KOS (Greek island).  
Home of Hippokrates,  
"Father of Medicine".



## Rapid multifunctional microwave tissue processor.

A state-of-the-art, multifunctional microwave tissue processor, the KOS is ideally suited as a complement to existing capabilities found in histology laboratories, where the multitasking nature of the instrument can enhance and accelerate many of the typical applications encountered.

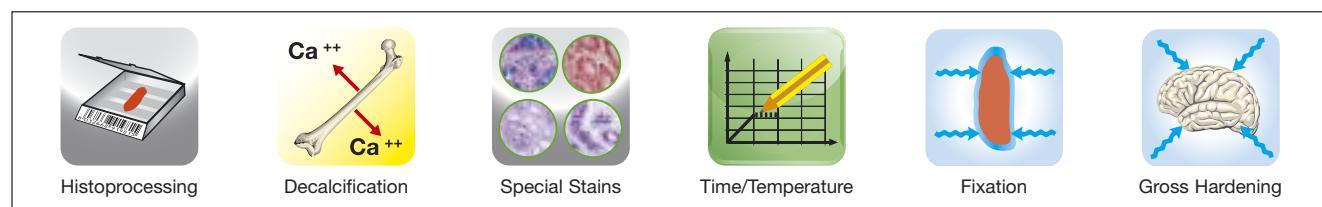
**SMART.** Icons driven.

**FAST.** Factory prestored optimized, full documented protocols for rapid, microwave enhanced procedures. No calibrations required. Just plug-in and process.

**RELIABLE.** Sensors controlled for protection of your precious specimens.

**FLEXIBLE.** User defined customized programs can be created and added to a most used favorites list for quick access, as required for meeting the needs of each user laboratory.

## Multifunctional. **One Unit. Six** Major Applications



### FULL COMPLIANCE TO CAP – C.L.S.I. GUIDELINES

The KOS tissue processor will enable the laboratory manager to fulfill the requirements set by the C.L.S.I. and CAP inspection guidelines. The ideal substitute for the "kitchen type" microwave oven utilized in many histology laboratories.

#### C.L.S.I. (FORMERLY N.C.C.L.S.) GUIDELINES.

REFERENCE: *Clinical and Laboratory Standards Institute. Microwave Device use in the Histology Laboratory; Approved Guideline.*

C.L.S.I. document GP28-A (ISBN 1-56238-563-1).

**CAP GUIDELINES.** REFERENCE: *Commission on laboratory accreditation. Anatomic pathology checklist - Rev. September 2007*



# Rapid tissue processing

**Same day results for all tissue types.**

- From 1 to 45 cassettes
- Ideal for transplant centers (Urgent biopsies)
- Safe. No xylene
- No proprietary reagents (Ethanol – isopropanol only)

## HIGH QUALITY SLIDES

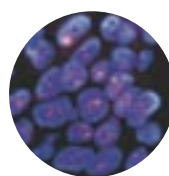
No compromise in regard to morphology and staining expression. Staining properties of microwave processed specimens are excellent for **H&E** routine staining, **HC**, **IHC**, **FISH**. In a fraction of the time.



Colonic biopsy, microwave processed in 30 minutes. H&E, x 400.



Adenocarcinoma, microwave processed Cytokeratin CAM5.2, x 400.



Breast cells HER2 amplification detection by FISH processed by microwaves. Red-labeled HER2 probe, x 800.



Breast cells HER2 amplification detection by IHC, processed by microwaves. Hematoxylin counterstain, x 400.



## FAST. UNMATCHED TISSUE PROCESSING TIMES.

**30 minutes**

for transplant biopsies including fixation.

**30 minutes**

for 1.5 mm biopsies. Add 10 minutes to include fixation.

**80 minutes**

for 3 mm biopsies. Add 25 minutes to include fixation.

## EASY. ICONS DRIVEN MENU.



1) Select thickness



2) Select number of cassettes



3) Select reagents



4) Press **GO**.



5) Press **START**. That's all



Time left will be shown on the terminal



# Bone Marrow processing

**Same-day diagnosis for bone marrow trephine biopsies.  
Will this help your patient?**

## DECALCIFICATION + PROCESSING IN LESS THAN 3 HOURS !

An ideal application of the technology and multifunctionality of the KOS.  
Optimized decalcification and processing protocols are factory stored.

EDTA.

Decalcification: 80 minutes

Processing: 60 minutes

**Total time: 140 minutes**

FORMIC ACID (5%).

Decalcification: 20 minutes

Processing: 60 minutes

**Total time: 80 minutes**

## FAST TURN AROUND TIME

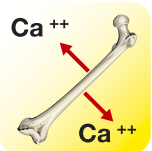


	Minutes	Temp.°C
Fixation in formalin:	10	50
Rinsing in tap water	10	
Decalcification (formic acid)	20	50
Rinsing in ethanol	2	
Tissue processing (Prowave)	15	
Impregnation in Wax	23	

**Total time (minutes) 80**



Bone marrow,  
EDTA, H&E x 100



# Rapid Bone Decalcification

Up to 45 cassettes.

An excellent application for the KOS.  
The efficient stirring continuously keeps the bone surface in contact with “fresh” decalcifier, positively influencing the equilibrium:

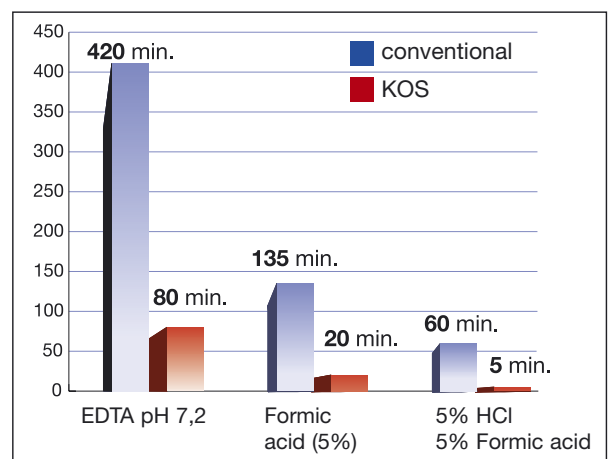


Simply select the temperature, the number of cassettes and the decalcifying solution.

Press GO

GO

**Hours, not days!**



CORE BIOPSY DECALCIFICATION TIMES (50° C)

# KOS

Packed with the latest microwave and sensor technology.  
Controlled by the most advanced, intuitive software.



## We almost forgot.

KOS is available in 3 beautiful .... sorry, stainful colors to suit the atmosphere of your laboratory.



**Congo Red!**



**GMS Green!**



**Alcian Blue!**



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