![agar scientific logo]

NLS Vibrating Blade Tissue Micro-Slicer
AGB4001

- Integral vibration isolation stage
- Very low irregular blade vibration (typically 1μm)
- Auto retraction function - prevents the blade from touching the specimen surface during backward movement
- Detachable blade holder
- Detachable ice bath
- Frequency digital display

NLS-MT and NLS-AT are high performance, vibrating blade tissue micro-slicers capable of producing highly accurate and consistent sections. NLS can section fresh and living tissue without the need to either freeze or paraffin embed specimens, unlike other types of microtomes which require hardened or frozen tissue.

The vibrating blade is powered by a high quality linear motor which minimises chatter (irregular vertical vibration) to typically 1 micron at the optimum resonance point. The vibration frequency is adjustable between 50 to 100Hz and the frequency displayed, which allows the blade to reach the minimum resonance point for the specific working conditions and for the specific sample. The vibration amplitude is continuously adjustable from 0 to 2mm and the cutting speed continuously adjustable from 0 to 44mm/min. These three functions can be independently set allowing full control to produce optimum slices.

The ability to section soft tissues has clear advantages:

- Less chance of artefacts caused by paraffin embedding or freezing
- Does not fracture cell membranes
- No need to de-paraffinise and rehydrate sections prior to immunostaining
- No high temperatures or harsh chemical treatments
- No special microtome blades required

With conventional tissue slicers, it can be difficult to obtain high quality tissue sections as these instruments often show irregular vertical blade vibration and significant loss of performance after long-term use. The NLS has overcome these challenges by incorporating a linear motor designed for long-term use without deterioration of performance.

The slicer is easy to use and setup, producing high quality sections with minimal damage to tissues and cells.

![agar scientific logo]
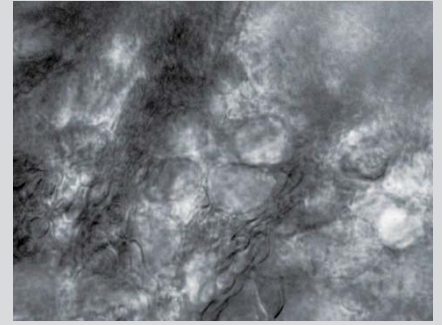
Animal section made with LinearSlicer®

🔬 P1 Chicken / Section thickness 100μm / StereoMicroscope
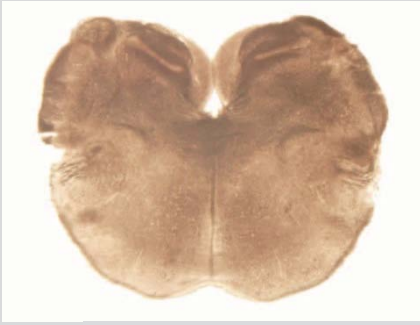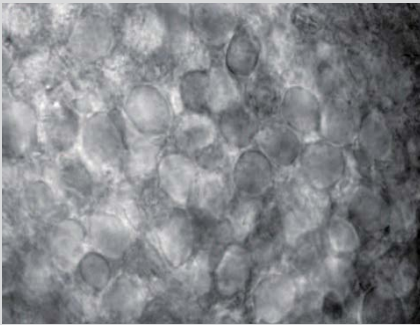

Brainstem

Brainstem auditory region

Cells of the cochlear nerve nucleus

🔬 Embryo Chicken / Section thickness 200μm / StereoMicroscope
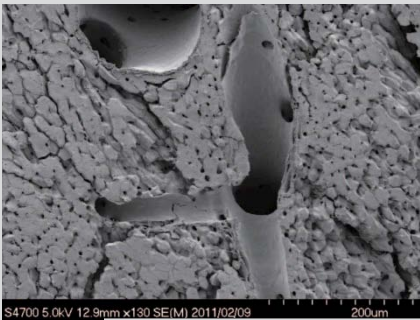

Cells of the cochlear nerve nucleus
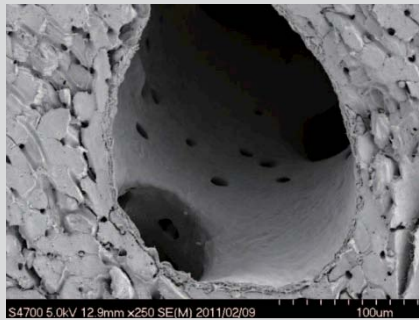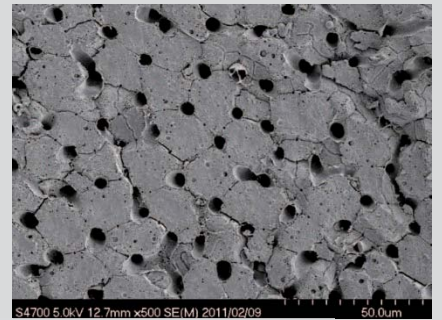

Cells of the cochlear nerve nucleus

🔬 Mouse / Liver / Scanning electron microscope
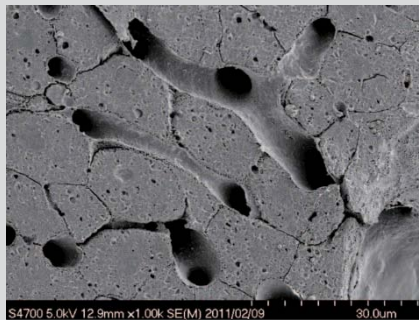

Magnification x130

Magnification x250

Magnification x500

Magnification x500

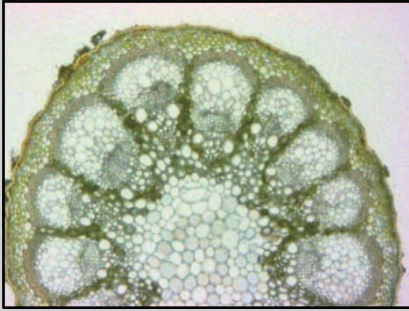Magnification x1000
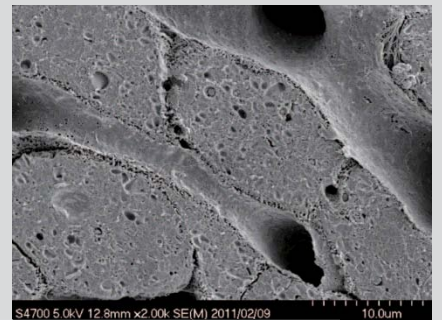
Magnification x2000

Plant section made with LinearSlicer®
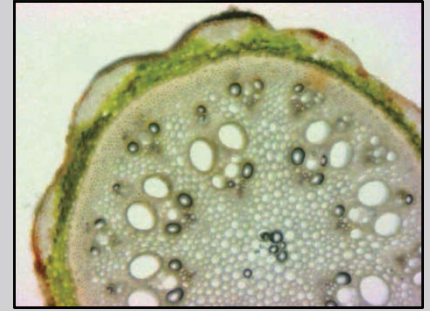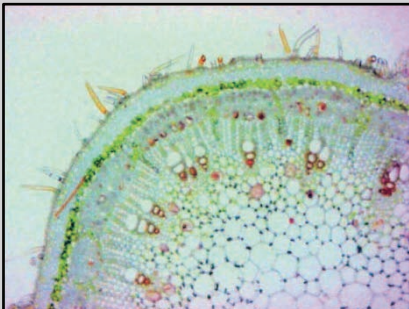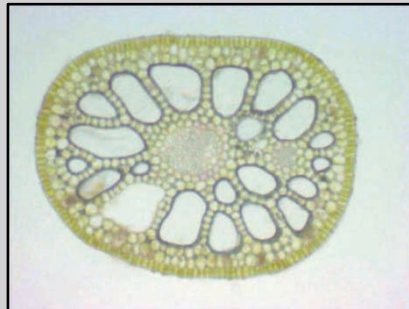

Cocculus orbiculatus: 40µm
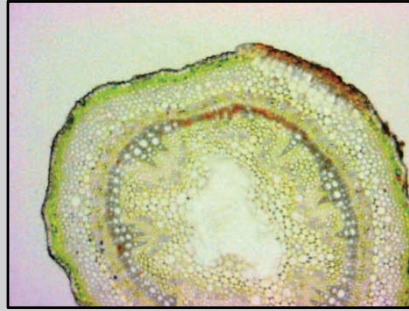
Ipomoea nil: 40µm
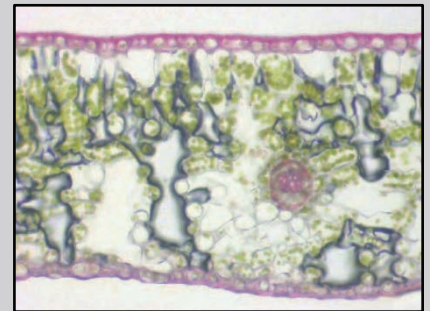

Dioscorea quinqueloba: 40µm

Pueraria montana: 40µm
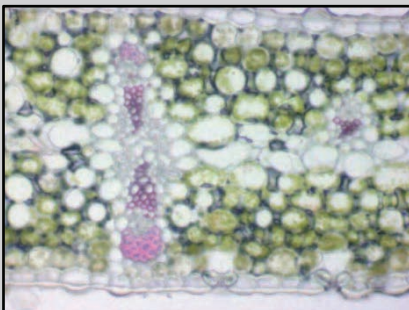

Vallisneria asiatica (flower stem): 50µm

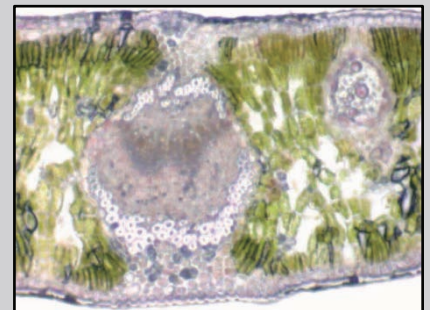Quercus glauca: 40µm

Oryza sativa subsp. japonica: 70µm

Cyrtomium falcatum: 60µm

Iris laevigata: 50µm

Miscanthus sinensis: 70µm

Eucalyptus: 40µm

NLS Vibrating Blade Tissue Micro-Slicer
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Two models are available:
NLS-MT - with manual thickness operation
NLS-AT - sections automatically by programmable options

Range of application

- Neuroscience
- Neurochemistry
- Histochemistry
- Cytochemistry
- Physiology
- Pharmacology
- Toxicology
- Pharmacokinetics
- Enzyme cytochemistry
- Histopathology
- Botany
- Applied entomology
- Regenerative medicine
- Tissue engineering
- Tissue culture
- Other research areas using tissue sections

Specification

Models	NLS-MT: Manual Model
	NLS-AT: Automatic Model
Dimensions:	W345mm x D500mm x H240mm
Weight:	35kg
Power:	100V 2A 50/50Hz
	(Inverter required for 240V operation)
Blade reciprocation frequency:	50-100Hz
Blade reciprocation amplitude:	0-2mm
Abnormal vibration:	Maximum 2µm (regularly less than 1µm)
Blade advance speed:	0-44mm/min
Blade retraction speed:	71mm/min
Limit of the specimen(s) size for sectioning:	W30 x D25mm
Vertical movement width of specimen stage:	15mm