

DELPet

μCT 100

High Performance Imaging System *in vivo* micro CT for preclinical study

Company Introduction:

DELBio Inc., member of Delta Group, is dedicated to the research & development of biomedical products. DELPet μCT 100 is the first micro CT developed in Taiwan, 100% in-house design and manufactured by DELBio except x-ray tube & detector. Key applications for μCT 100 are disease model and drug development of pre-clinical animal study, agriculture and industry.



TAIWAN EXCELLENCE
GOLD AWARD 2018



GOOD
DESIGN



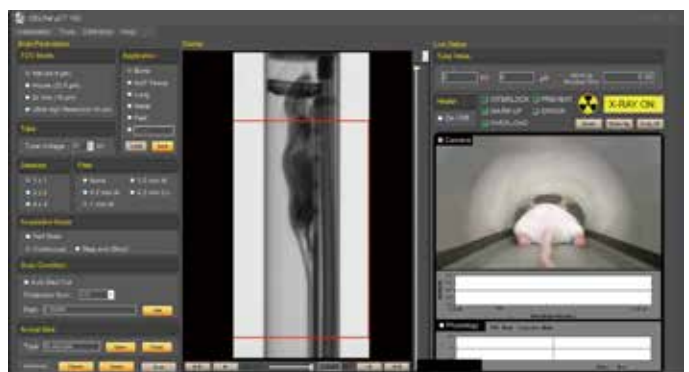
Auto-setting



Fast-scan



High-resolution



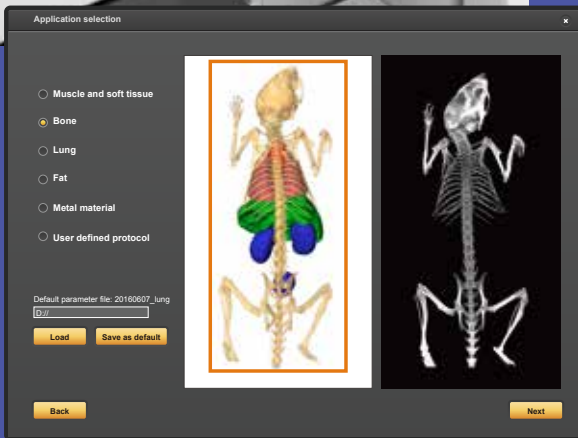
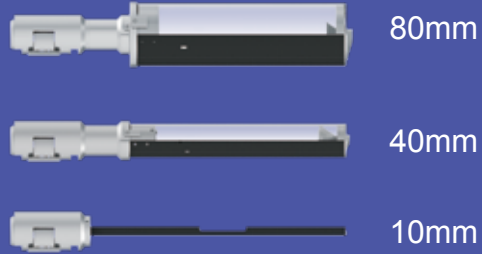
- 1 (One) Touch : Automatic recognizable animal bed for FOVs selection.
- 2 Seconds : Fast scan mode
- 2 μm : High-resolution image
- Patent design : One click animal bed installation & automatic collision avoidance system.
- Independent heated airflow and anesthesia system helps to maintain the stable vital signs of the animal
- Equipped with tube voltage range :40-90 kVp , 50W

1
touch

One touch auto-setting



• Automatic recognizable animal bed

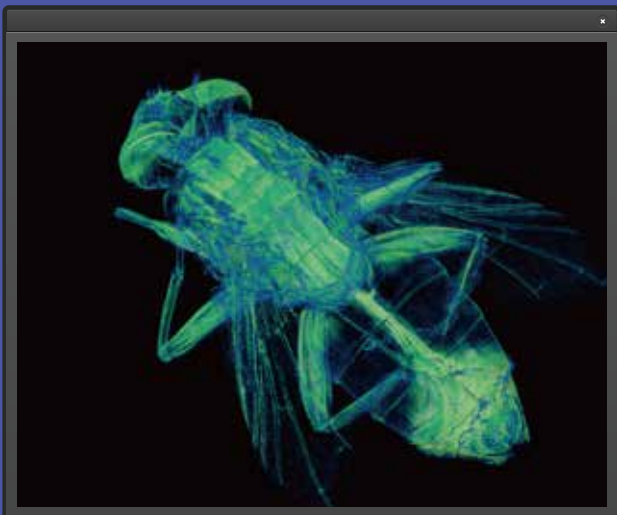
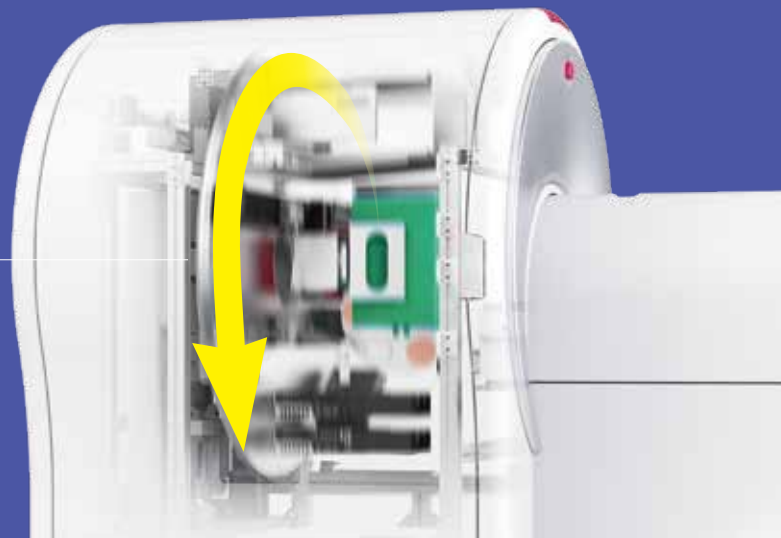


• Automatic multi-filter and FOV modes selection:
Rat
Mouse
Ex vivo
Ultra-High Resolution

2
sec.

Fast-scan

Fast data acquisition



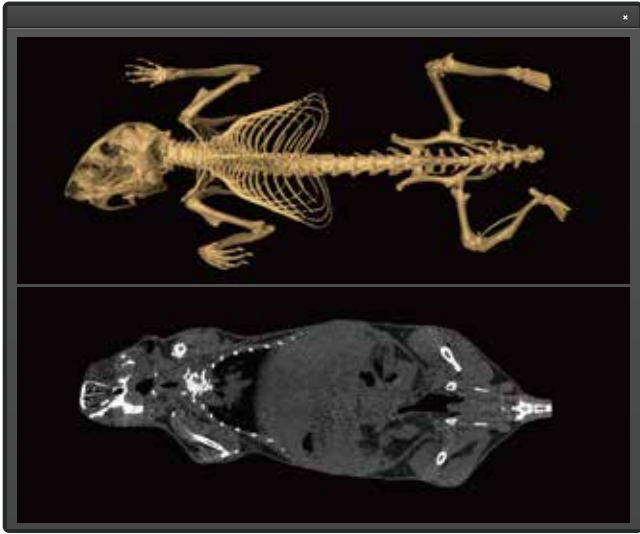
2
µm

High-resolution scanning

• High image quality
• High precision platform and motor system

Applications

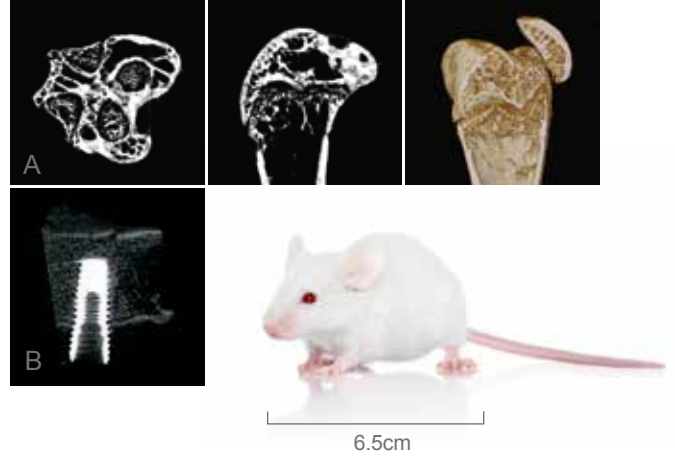
- Pre-clinical animal study



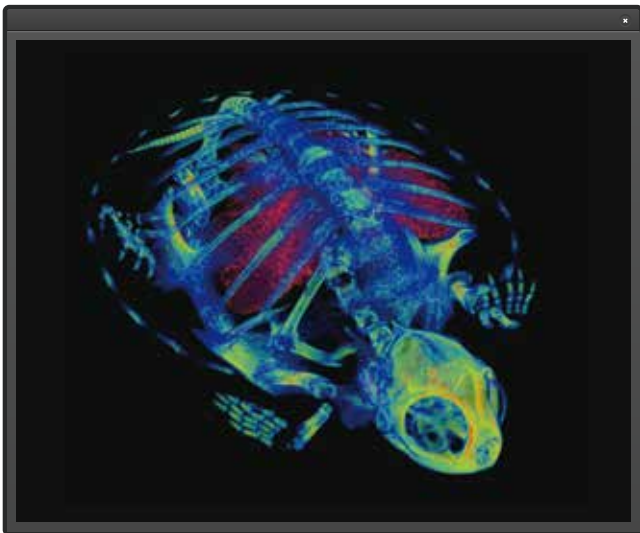
Mouse Femur

9 μm pixel size in ultra-high resolution mode.

- A. Axial and sagittal view show mouse femur structure.
- B. The coronal slice through a bone with a Ti material implant.



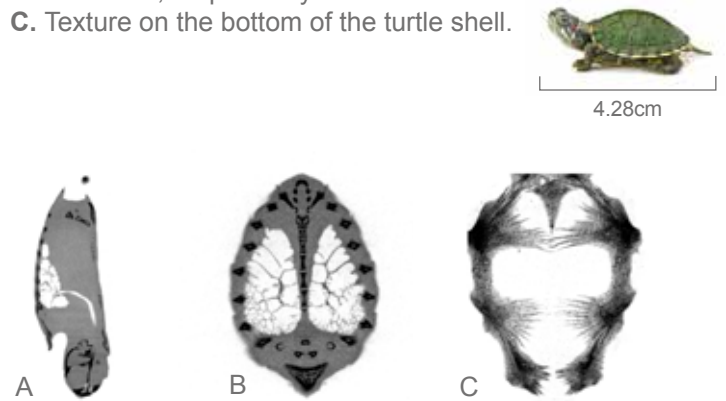
- Animal



Turtle

Volume rendering combined with surface rendering of a turtle.

- A. B. Lung and trachea of the turtle in sagittal view and coronal view, respectively.
- C. Texture on the bottom of the turtle shell.



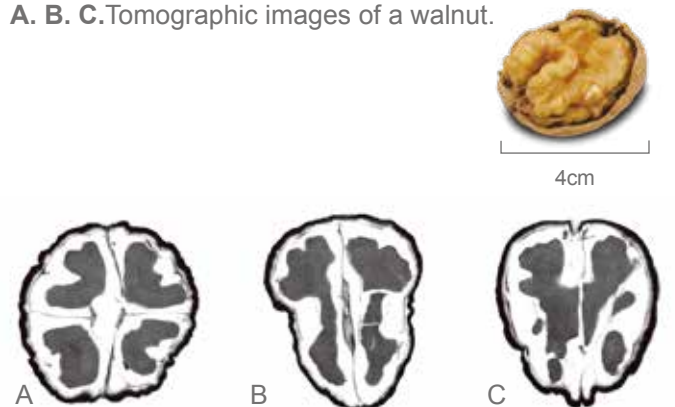
- Food



Walnut

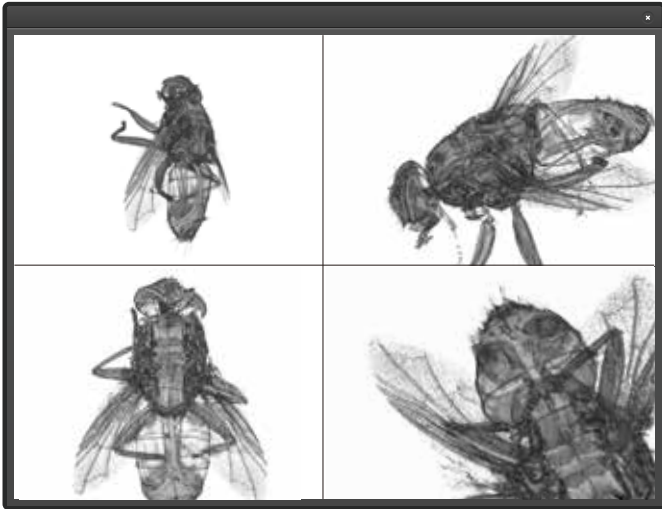
Volume rendering of a walnut. 22.5 μm pixel size in mouse mode.

- A. B. C. Tomographic images of a walnut.

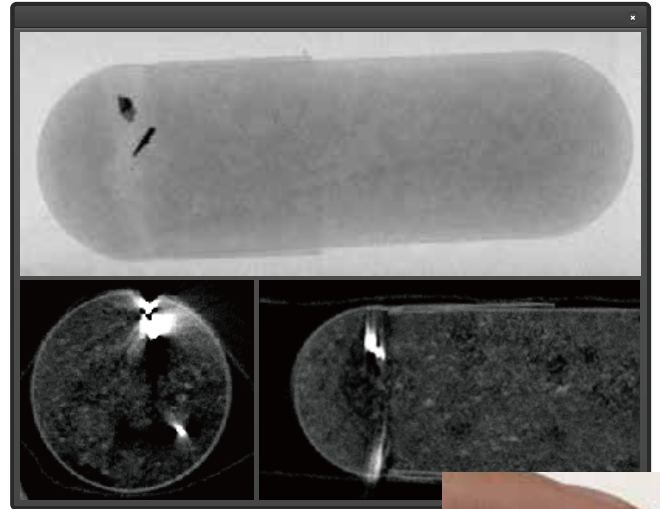


Applications

• Agriculture



Fly
Volume rendering of a fly.
9 μm pixel size in ultra-high resolution mode.



Pharmaceutical
Detection of foreign body from tomography.

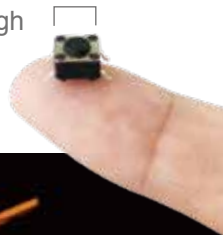


• Industry



Switch
9 μm pixel size in ultra-high resolution mode.

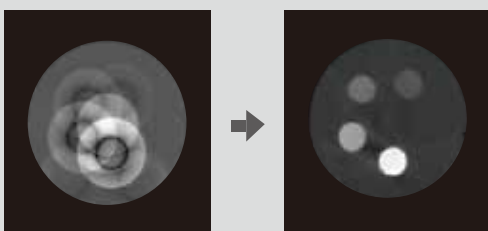
0.6cm



High precision platform

Hardware mechanical calibration

Commercial Micro CT



Before GC

After GC

DELPet μCT 100

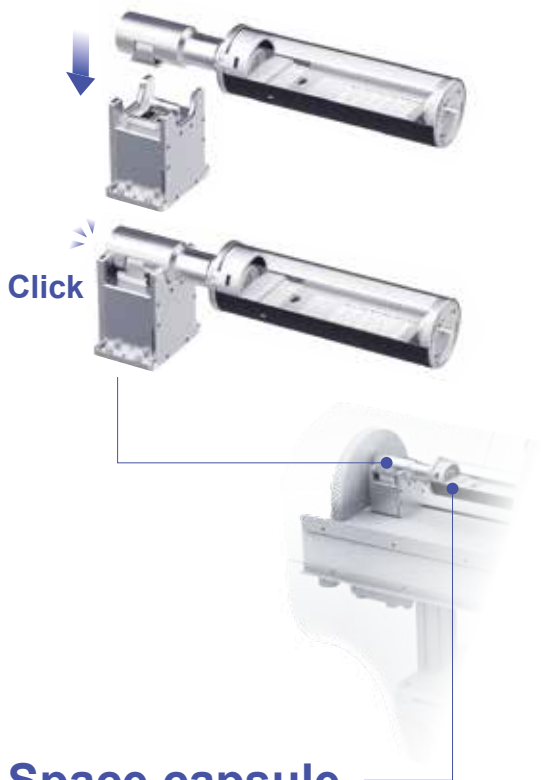


Before GC

After GC

*GC: Geometry calibration

One click installation



Space capsule

All-in-one:

Anesthesia, ECG, Temperature, Camera monitor

Controllable warming chamber

Anesthesia gas absorption system



Cube-shielding

Self-shielding:

Cube radiation protection



Specifications

X-ray source	40-90 kV, 50 W
Additional filter	Five filters can be selected by user
X-ray detector	1536x1944, 14 bits CMOS detector
Spatial resolution	44.9, 22.5, 15.0, 9.0, 2.0 μm
CT camera active area	80x200 mm
Reconstruction size	1944x1944x1536 for single scan
Scan time	Standard scan time 20 sec. Fast scan time 2 sec.
Size (WxDxH) mm	880 mm(W)x1500 mm(D)x1500 mm(H)
Weight	< 950 kg
Radiation safety	< 1 $\mu\text{Sv/h}$ at 10 cm in any point on the instrument surface during scan

Product Accessories

- QRM phantom(Water phantom, HA phantom)
- Animal bed x3 (Rat-sized bed, Mouse-sized bed, Ex-vivo bed)
- ECG and temperature monitor
- DICOM format
- Functions of 3D image display, distance and area measurement
- Bone density, morphometric analysis and adipose analysis software

Optional

- Anesthesia system
- Uninterruptible power supply (UPS)

DELBio

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