charles river

Summary
Charles River Laboratories offers the latest advanced imaging technology to enhance safety assessment studies of therapeutics that affect the eye.

SAFETY ASSESSMENT

Anterior Segment Spectral Domain-Optical Coherence Tomography

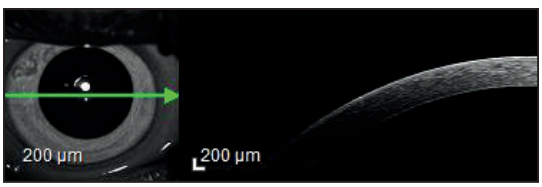
Anterior segment spectral domain-optical coherence tomography (SD-OCT) is the latest imaging technique that can be applied to safety assessment studies of ocular therapeutics and therapeutics which affect the eye.

Charles River uses the Heidelberg SPECTRALIS® SD-OCT for anterior segment ocular imaging. The Heidelberg SPECTRALIS® can be used to obtain scanning laser ophthalmoscopic images and SD-OCT scans of the cornea, anterior segment and iris.

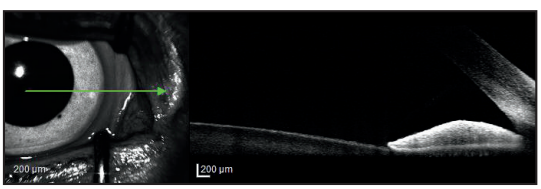
Corneal scans allow for assessment of corneal thickness (CT) and low resolution imaging of corneal cells. This non-invasive technique allows for monitoring of CT over the duration of a safety assessment study. Measurements are taken prior to the initiation of dosing and, at a minimum, following cessation of dose administration. By imaging the iridocorneal angle, changes in angle can be monitored over the duration of a safety assessment study.

SD-OCT provides the capability for non-invasive imaging of anterior segment ocular structures. This technique is particularly suited to topical ocular instillation, intracameral injection or corneal transplant toxicology studies in many of the commonly used laboratory species. It is also applicable to the evaluation off target effects of non-ocular therapeutics administered by other dose routes.

In addition to anterior segment SD-OCT, posterior segment structures such as the retina and optic nerve can be imaged.



cSLO image and corneal OCT for thickness measurement



cSLO image and single angle OCT imaging for angle measurement

EVERY STEP OF THE WAY