

ScanTox™ *In Vitro* Toxicology Assay System

Specifications

ScanTox™ Lens Scanner:

Cell Container	Individual optical glass cell holder rotates to each 90° position
Wetted Materials	Glass, Silicone rubber, 316 SS
Laser Source	Stable 670 nm 4 mW diode laser
Digital Imaging Cameras	One for alignment and a second for beam capture. Both with 320 x 240 pixel color resolution at 30 frames per second
Beam Positioner	Precise, microprocessor controlled microdrive, settleable from 1.0 to 0.01 mm per step increments moves the mirror not the lens
Cover Interlock	Safety interlock turns off laser when cover is opened
Dimensions, H x W x D	41 x 40 x 18 cm (16 x 15 x 7 in)
Weight	11.8 kg (26 lbs)
Power	115/230 VAC, 50/60 Hz

ScanTox™ Project Manager and System Controller:

Project Manager	Allows user to set project details, passwords, and labeling of groups in experiments
Scan Display	Incorporates back vertex distance, focal length, and intensity of light as laser passes through lens scan point
Project Trend	Software allows determination of effect of irritant on lens over time and whether damage to the eye is reversible
Dimensions, H x W x D	41 x 38 x 18 cm (16 x 15 x 7 in)
Weight	11 kg (24 lbs)
Power	115/230 VAC, 50/60 Hz

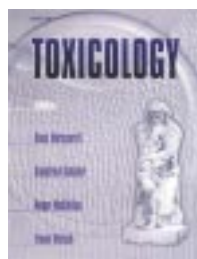
ScanTox™ Components

1	ScanTox™ Laser Lens Scanner with Dual Imaging Cameras, Power Supply and Interface Cable
1	ScanTox™ <i>In Vitro</i> Toxicology Software, Complete Toxicology Experiment Application for Windows®
10	Lens Containers, Storage and Scanning Containers to Fit the ScanTox™ Laser Lens Scanner
1	System Controller, Pentium III PC with Windows 98, Interface Card, 17 inch Monitor, Keyboard, Mouse, CD ROM Drive, 3.5 inch Floppy and Required Cables
1	Calibration Kit, Including Test Lens and Solution for System Validation

Catalog No.	Product
CGS 8001.77	ScanTox™ <i>In Vitro</i> Toxicology Assay System Complete
CGS 8002.77	Additional Lens Containers, Storage and Scanning Containers to fit the ScanTox™ Laser Lens Scanner, pkg. of 10

Publications Pertinent to ScanTox™:

1. Simmons, L., Moccia, R.D., Bureau, D.P., Sivak, J.G. and Herbert, K. (1999). Dietary Methionine Requirement of Juvenile Arctic Charr, *Salvelinus alpinus* L. J. of Aquaculture Nutrition (in press).
2. Herbert, K.L., Sivak, J.G., Bell, R.C. (1999). Effect of diabetes and fructose/non-fructose diet on the optical quality (cataracts) of the rat lens. *Current Eye Research*, Vol. 19, No. 4, 305-312
3. Bantseei, V., Herbert, K.L., Sivak, J.G. and Trevitbick, J.R. (1997). Laser scanning focal length variability is a measure of damage in rat lens in model astronaut cataracts treated with vitamin E (VE) or R- α -Lipoate (RLA). NATO Advanced Study Workshop - Ocular Radiation Risk Assessment in Populations Exposed to Environmental Radiation Contamination. Kiev (in press) (17 pages, including 6 tables and 2 figures).
4. Sivak, J.G. and Herbert, K.L. (1996). Optical damage and recovery of the *in vitro* bovine ocular lens for alcohols, surfactants, acetates, ketones, aromatics, and some consumer products: a review. *Journal of Toxicology-Cutaneous and Ocular Toxicology*, 16, 173-187.
5. Doughty, M.J., Herbert, K.L., Stuart, D.D. and Sivak, J.G. (1995). Use of corneal dimensions to standardize selection of the crystalline lens from bovine slaughterhouse eyes in the lens optical function toxicity test. *In Vitro Toxicology*, 8, 219-227.
6. Sivak, J.G., Herbert, K.L. and Fonn, D. (1995). *In vitro* ocular irritancy measure of four contact lens solutions. *The CLAO Journal* 21, 169-174.
6. Dorfman Hecht, J.E., Sivak, J.G., Doughty, M.J., Moccia, R.D. (1994). Acute effects of NUVAN on the optical and biochemical properties of cultured Atlantic salmon (*Salmo salar*) lenses. *In Vitro Toxicology* 7, 339-349.
7. Stuart, D.D., Cullen, A.P., Sivak, J.G. and Doughty, M.J. (1994). Optical effects of UVA and UV-B radiation on the cultured bovine lens. *Current Eye Research* 13, 371-376.
8. Sivak, J.G. and Herbert, K.L. (1994). Optical performance of the ocular lens as in *in vitro* alternative to the Drazte test. *In Current Trends: In Vitro Skin Toxicology and Eye Irritancy Testing*. The Joseph F. Morgan Foundation, Ottawa, 55-62.
9. Douvat, A., Horvitz, J., Sivak, J.G., Weinreb, C., Scharf, J. and Silberman, M. (1993). DL-Propripranolol inhibits lens hexokinase activity and affects lens optics. *Experimental Eye Research* 57, 747-752.
10. Cowey, C.B., Cho, C.Y., Sivak, J.G., Weerheim, J.A. and Stuart, D.D. (1992). Methionine intake in rainbow trout (*Oncorhynchus mykiss*), relationship to cataract formation and metabolism of methionine. *Journal of Nutrition* 122, 1154-1166.
11. Sivak, J.G., Stuart, D.D. and Weerheim, J.A. (1992). Optical performance of the bovine lens before and after cold cataract. *Applied Optics* 31, 3616-3620.
12. Stuart, D.D., Sivak, J.G., Cullen, A.P., Weerheim, J.A. and Monteith, C.A. (1991). UVB radiation and the optical properties of cultured bovine lenses. *Current Eye Research* 10, 177-184.
13. Sivak, J.G., Stuart, D.D., and Weerheim, J.A. (1991). Optical properties of the bovine lens before, during and after the induction of cold cataract. *Optical Society of America. Technical Digest: Ophthalmic and Visual Optics, Series Volume 2*, 25-27.
14. Sivak, J.G., Yoshimura, M. and Weerheim, J.A. (1990). Effect of gentamicin and chloramphenicol on bovine lens optical function during culture. *J. of Toxicology: Cutaneous and Ocular Toxicology* 9, 265-275.
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16. Mitton, K.P., Dzialoszynski, T., Weerheim, J., Trevitbick, J.R., and Sivak, J.G. (1989). Modelling cortical cataractogenesis. X. Evaluation of lens optical function by computer based image analysis using *in vitro* rat lens elevated glucose model. *J. of Eye Toxicology and Lens Research* 6, 211-228.
17. Sivak, J.G., Gur, M. and Douvat, A. (1983). Spherical Aberration of the Lens of the Ground Squirrel (*Spermophilus tridecemlineatus*). *Optical Physiol. Opt.*, Vol 3(3), 261-265.
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24. Doughty, M.J., Herbert, K.L., Stuart, D.D. and Sivak, J.G. (1995). Use of Corneal Dimensions to Standardize Selection of the Crystalline Lens from Bovine Slaughterhouse Eyes in the Lens Optical Function Toxicity Test. *In Vitro Toxicology*, Volume 8 (3), 219-227.



Toxicology

Hans Marquardt, Seigfried Schäfer, Roger O. McClellan, and Frank Welsch. This book presents a comprehensive investigation covering all areas in the field of toxicology. It incorporates areas such as organ toxicology, applications, and environmental toxicology. Ideal for researchers and graduate students in the field. (1040 pp; 1999)

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