In vivo Bioluminescence Imaging Using ALZET® Osmotic Pumps

Bioluminescence imaging (BLI) technologies, such as the IVIS® Imaging System from Caliper Life Sciences, allows for real-time monitoring of ongoing biological processes in living animals. BLI is based on the detection of visible light produced during luciferase-mediated oxidation of the molecular substrate, luciferin, when the enzyme is expressed *in vivo* as a molecular reporter. ALZET pumps provide reliable and prolonged bioluminescent substrate delivery, eliminating complications of repetitive injections and ensuring accurate detection of *in vivo* bioluminescence.

When using ALZET pumps in BLI studies, the flange on the distal end of the flow moderator can display nearly a 100-fold higher chemi-luminescence signal compared to the background signal. However, pumps using our custom teal or blue flow moderators display no visible chemi-luminescence signal (Fig. 1A, 1B). Thus, for BLI applications researchers should replace the white flow moderators, included in each package of ALZET pumps, with our BLI-compatible flow moderators.

Fig 1A

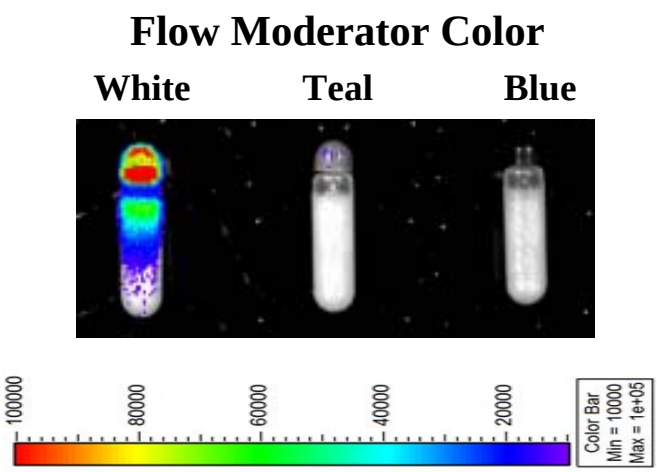
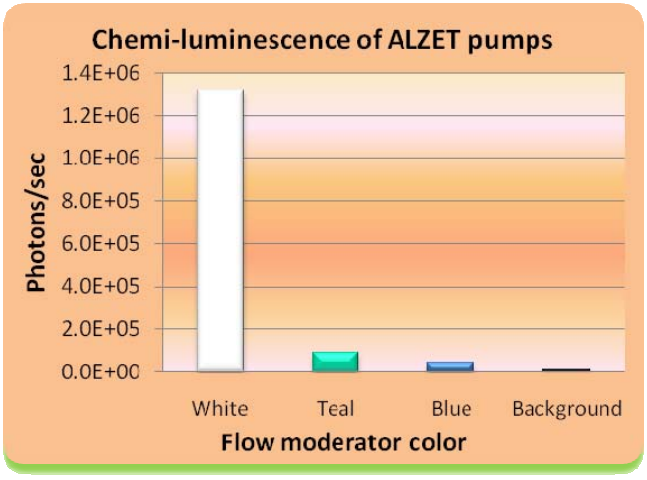


Fig 1B



To learn more about BLI-compatible flow moderators, please download our BLI fact sheet here: http://www.alzet.com/resources/documents/BLITechSheet_applications.pdf

To speak with a technical support representative regarding your specific study, call 800-692-2990 or e-mail us at alzet@durect.com