

PROBLEMS WITH PLASTICS AND AXOLOTLS

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Polystyrene plastic boxes make inexpensive and compact containers for housing axolotls. However, the publication Amphibians: Guidelines for the Breeding, Care, and Management of Laboratory Animals (1974, NAS/NCR) by G.W. Nace et al. states that plastics may contain "potentially dangerous constituents", but goes no further. In February, 1979 I attempted to interest Lab Animal magazine in publishing an article on this subject, but they were unable to find anyone to do this. They did however, publish my letter. I have been able to find the following information:

1. Plastics in order of increasing levels of plasticizer leaching polyethene, polystyrene, polycarbonate, and polypropylene (from Lab Products, Inc. - manufacturer). It also appears that PVC rates with polypropylene.
2. Plastics actually support fungal and bacterial growth. Aspergillus versicolor, Pseudomonas aeruginosa and P. fluorescens grow extremely well on the plasticizers with a 25 time rate increase for P. aeruginosa and a 44 time rate increase for P. fluorescens (Stahl and Pessen, 1952; Masson and Michel, 1978).
3. Both Durward Banister at Argonne National Laboratories and myself have had axolotls with inflammed skin cleared up when moved from plastic to glass bowls.
4. The growth rate on our animals drops when they are moved from enamel pans to individual plastic boxes, but this could be due to many factors.

References:

- Masson, A. and Michel, R. 1978. Bacteriologie des eaux minerales: Influence du PVC sur la croissance de Pseudomonas Aeruginosa et Pseudomonas Fluorescens. Industries Alimentaires et Agricoles 5; 503-507.
- Stahl, W. and Pessen, H. 1952. The microbiological degradation of plasticizers. I. Growth on esters and alcohols. Applied Micro. Bio. 1; 30-35.