

Predicting Chemical Residues in Aquatic Food Chains. Lawrence Burkhard, USEPA, ORD, NHEERL, Duluth, MN

The need to accurately predict chemical accumulation in aquatic organisms is critical for a variety of environmental applications including the assessment of contaminated sediments. Approaches for predicting chemical residues can be divided into two general classes, empirical and mechanistic. Empirical methodologies use field measured bioaccumulation factors (BAFs) or biota-sediment accumulation factors (BSAFs) to predict chemical residues in fish and other aquatic organisms. Mechanistic methodologies predict chemical residues in aquatic organisms using food chain models. A discussion of the data requirements, uncertainties and applications will be presented for each methodology.