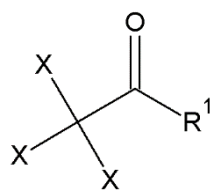


ABSTRACT

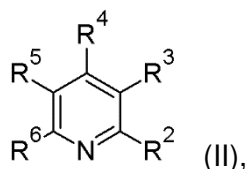
METHOD OF PRODUCING DEUTERATED HALOFORM

The invention relates to methods of producing deuterated haloform, and apparatus for such methods. In an aspect of the invention, there is provided a method to produce deuterated haloform, the method comprises:

- (a) providing a mixture comprising a compound of formula (I)



(I), heavy water, and a catalyst of formula (II),



wherein each X in formula (I) is independently a halogen, and R¹ is an aliphatic group, or an aryl group, wherein at least one of R², R³, R⁴, R⁵, and R⁶ is an anionic functional group, a polymer, or a linker attached to a polymer;

- (b) heating the mixture to displace the trihalocarbon anion; and
(c) forming the deuterated haloform.

(Fig. 1)