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## Location of the general anesthetic n-decane in model membranes

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The location of n-decane molecules within the model biological membrane consisting of dioleoyl-phosphocholine (DOPC) bilayers has been investigated via small angle neutron diffraction (SAND) method. Diffraction patterns of the samples containing varied amounts of labeled and unlabeled n-decane have been obtained at various H<sub>2</sub>O:D<sub>2</sub>O scattering contrasts and utilized in the reconstruction of their neutron scattering length density (NSLD) profiles. The experimental data analysis based on mutual comparison of contrast varied NSLD profiles revealed unambiguously the location of n-decane molecules within our complex liquid system. They are distributed mostly in the lipid bilayer center while oriented both perpendicular to the bilayer normal, as well as in orientation parallel to the bilayer normal. In this, the mode of n-decane incorporation differs very little for the different concentrations examined (1:1 and 2:1 n-decane:DOPC molar ratios).

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