

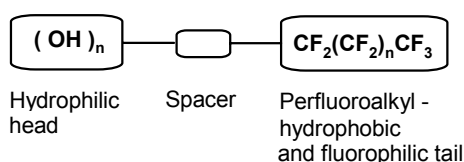
# AMPHIPHILIC PERFLUORALKYLATED POLYOLS FOR BIOMEDICINAL APPLICATIONS

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**The combination of a strongly hydrophilic molecular part with strongly hydrophobic chain**

Fluorinated amphiphilic molecule:



**(through a spacer) creates amphiphilic properties. Such compounds can be used for medicinal purposes, e.g. as potential biosurfactants. Biocompatible perfluoroalkylated surfactants display unique properties for the formulation of colloidal systems including perfluorocarbon emulsions for blood substitutes, oxygen transporting gels, drug delivery systems etc.<sup>1,2</sup>**

The aim of this study has been 1) development

of the synthesis of stereochemically pure perfluoro-alkylated xylitol derivative **1** as a new standard compound, 2) syntheses of series of new isomeric perfluoroalkylated triols **2-4** and **5-7**,

3) testing of

hemocompatibility

and coemulsifying

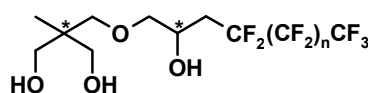
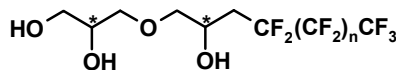
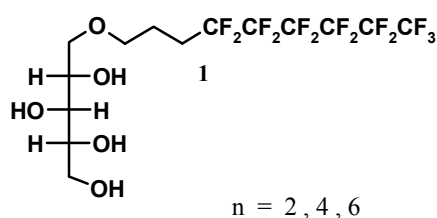
properties of the new

amphiphiles **1-7**.

The testing

has revealed very low

hemolysis for **1** even at high concentrations (substitution of the standard emulsifier Pluronic F-68), very low hemolysis for triols **3** and **4**, but evident hemolysis for isomeric triols **6-7** having branched hydrophilic head.



Amphiphile	Substitution of Pluronic F-68 (% w/v PF-68)			
	20%	40%	60%	80%
	Range of hemolysis (%)			
<b>1</b>	0	0	0	0
<b>3</b> (n = 4)	0	0	-	0
<b>6</b> (n = 4)	0	0	0	10

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## References

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