

uniform polymer

A polymer composed of molecules uniform with respect to relative molecular mass and constitution.

Notes:

1. A polymer comprising a mixture of linear and branched chains, all of uniform relative molecular mass, is not uniform.
2. A copolymer comprising linear molecules of uniform relative molecular mass and uniform elemental composition but different sequential arrangements of the various types of monomeric units, is not uniform (e.g. a copolymer comprising molecules with a random arrangement as well as a block arrangement of monomeric units).
3. A polymer uniform with respect only to either relative molecular mass or constitution may be termed 'uniform', provided a suitable qualifier is used (e.g. 'a polymer uniform with respect to relative molecular mass').
4. The adjectives 'monodisperse' and 'polydisperse' are deeply rooted in the literature, despite the former being non-descriptive and self-contradictory. They are in common usage and it is recognized that they will continue to be used for some time; nevertheless, more satisfactory terms are clearly desirable. After an extensive search for possible replacements, the terms 'uniform' and 'non-uniform' have been selected and they are now the preferred adjectives.

Source:

IUPAC, 1996, 68, 2287 (*Glossary of basic terms in polymer science (IUPAC Recommendations 1996)*) on page 2301