Mark–Houwink equation

The equation describing the dependence of the intrinsic viscosity of a polymer on its relative molecular mass (molecular weight) and having the form:

$$[\eta] = K \cdot M_r{}^a$$

where $[\eta]$ is the intrinsic viscosity, K and a are constants the values of which depend on the nature of the polymer and solvent as well as on temperature and M_r is usually one of the relative molecular mass averages.

Notes:
1. The use of this equation with the relative molecular mass (molecular weight) is recommended, rather than with molar mass (which has the dimension of mass divided by amount of substance), since in the latter case the constant K assumes awkward and variable dimensions owing to the fractional and variable nature of the exponent a.
2. Kuhn and Sakurada have also made important contributions and their names are sometimes included, as, for example, in the Kuhn–Mark–Houwink–Sakurada equation.

Source:
Purple Book, p. 64