

GRADES OF PURITY FOR CHEMICALS

The following is a partial listing of designations which have been generally adopted to indicate different degrees of quality and primary uses of laboratory chemicals. The grades are listed by decreasing degrees of purity.

Reagent. High purity for analytical use. Bottles are often labeled to show lot analysis and/or maximum limits of impurities.

ACS. Meets reagent specifications of the American Chemical Society.

Chemically Pure (CP). Suitable for routine use. Lot analysis not specified.

USP. Meets the specifications of the United States Pharmacopeia.

NF. Meets the specifications of the National Formulary.

Pharmaceutical Grade. Designates products listed in the USP and NF compendia.

Practical. Principally organic compounds of medium purity often purified from technical grade. Considered suitable for most syntheses.

Purified. Superior to technical grade, being free from excessive foreign matter. Suitable for most purposes except analysis.

Technical, Commercial, or Industrial. Chemicals of ordinary commercial purity. Not refined for laboratory use.

Most household chemicals are purified grade or better. They can be used in most experiments and activities with no adverse effects on results. Always pretest any materials in the experiment/demonstration with proper precautions.