

TABLE 2. Densities and cubic expansion coefficients of the pure carbohydrates near 298 K obtained from the literature

Carbohydrate	ρ^* g cm ⁻³	Reference
β -D-allose(cr)	1.593 ^c	[84KRO/SLU]
β -arabinose(cr)	1.619 ^c	[61HOR]
β -L-arabinose(cr)	1.626 ^{b,c}	[77TAK/JEF]
β -DL-arabinose(cr)	1.636 ^{b,c}	[67KIM/JEF]
	1.640 ^{b,c}	[79TAK/NOR]
β -D-fructose(cr)	1.601 ^{b,c}	[77KAN/ROE]
β -D-fructopyranose(cr)	1.599 ^{b,c}	[77TAK/JEF2]
α -D-galactose(cr)	1.619 ^c	[76OHA/GIL] ^d
	1.61 ^c	[76SHE]
β -D-galactose(cr)	1.579 ^a	[75LON/OHA] ^d
	1.595 ^c	[76SHE]
glucose(glass)	1.523 ^b	[28PAR/HUF]
glucose(cr)	1.540 ^b	[65RAM/GOR]
α -D-glucose(cr)	1.566 ^c	[65BRO/LEV]
	1.560 ^c	[74SWA/MUR]
	1.562 ^c	[79BRO/LEV]
β -D-glucose(cr)	1.528 ^{b,c}	[63FER]
	1.552 ^{b,c}	[68CHU/JEF]
lyxose(cr)	1.544 ^c	[66HOR]
β -L-lyxopyranose(cr)	1.536 ^c	[78NOR/TAK]
mannose(cr)	1.501 ^b	[31MAR]
α -D-mannopyranose(cr)	1.564 ^c	[76LON/AVE]
D-ribose(cr)	1.59 ^{b,c}	[56FUR/HOR]
α -L-sorbopyranose(cr)	1.607 ^{b,c}	[67KIM/ROS]
	1.605 ^{b,c}	[79NOR/TAK]
α -D-tagatose(cr)	1.655 ^c	[69TAK/ROS]
α -D-talose(cr)	1.591 ^{b,c}	[77HAN/HOR]
α -D-talopyranose(cr)	1.602 ^c	[77OHA/AVE]
D-xylose(cr)	1.617 ^c	[58WOO]
α -xylose(cr)	1.511 ^c	[71HOR]
α -L-xylopyranose(cr)	1.663 ^{a,b}	[80JEF/ROB]
	1.524 ^c	[79TAK/JEF]

Cubic expansion coefficients at 298.15 K

Compound	$\frac{\alpha^* \times 10^4}{K^{-1}}$	Reference
glucose(cr)	3.1	[28PAR/HUF]
glucose(glass)	2.4	[65RAM/GOR] ^d

^aOne set of x-ray data for α -L-xylopyranose was determined at 123 K by [80JEF/ROB].

^bDetermined by flotation method.

^cCalculated from x-ray data.

^d[65RAM/GOR] report the existence of a second order phase transition at ≈ 296.2 K. Below this temperature, the cubic expansion coefficient is equal to $5.1 \times 10^{-4} K^{-1}$.