

Å	Angstrom
ARR	Arrhenius
A-type	polymorphic crystalline form of starch
Ap	amylopectin
Aw	water activity
"Aw"	"water activity" (i.e. relative vapor pressure, p/p°)
a_T	WLF shift factor as a function of temperature
a_p	WLF shift factor as a function of plasticizer content
BET	Brunauer-Epstein-Teller
B-type	polymorphic crystalline form of starch
C	concentration
$^{\circ}\text{C}$	degrees Centigrade
CMC	carboxymethyl cellulose
Ce	solute concentration at T_e
Cg	solute concentration in an aqueous glass at its T_g
Cg'	solute concentration in an aqueous glass at its T_g'
Cp	heat capacity
ΔC_p	change in heat capacity
C1, C2	coefficients in the WLF equation
cal	calorie
cm	centimeter
cP	centipoise
cps	cycles per second
D	diluent concentration
DE	dextrose equivalent
Dg	diluent concentration in a glass at its T_g
Dg'	diluent concentration in a glass at its T_g'
DM	dry matter
DMA	dynamic mechanical analysis
DMSO	dimethyl sulfoxide
DNA	deoxyribonucleic acid
DP	degree of polymerization
\overline{DP}_n	number-average degree of polymerization
\overline{DP}_w	weight-average degree of polymerization
DSC	differential scanning calorimetry
DTA	differential thermal analysis
d.b.	dry basis
d.s.	dry solids

EPR	electron paramagnetic resonance
e.g.	for example
endo	endothermic
$^{\circ}\text{F}$	degrees Fahrenheit
FW	freezable water
f	activity coefficient
G	Gibbs free energy
ΔG	change in Gibbs free energy
GAB	Guggenheim-Anderson-DeBoer
GHz	gigahertz
GR	growth rate
g	gram
H	enthalpy
ΔH	enthalpy change
HFCS	high fructose corn syrup
h	hydration number
hr	hour
I	ionic strength
IMF	intermediate-moisture food
i.e.	that is
J	Joule
J'	storage compliance
K	equilibrium dissociation constant
$^{\circ}\text{K}$	degrees Kelvin
KHz	kilohertz
k	rate constant
kg	kilogram
kilobar	1000 atmospheres pressure
\log_{10}	logarithm, base 10
ln	natural logarithm
M	molar concentration
MPa	megaPascal
MW	molecular weight
MWD	molecular weight distribution
\bar{M}_n	number-average molecular weight
\bar{M}_w	weight-average molecular weight
\bar{M}_n'	number-average molecular weight of the solute-UFW glass at its T_g'
\bar{M}_w'	weight-average molecular weight of the solute-UFW glass at its T_g'
\bar{M}_w/\bar{M}_n	polydispersity index
m	molal concentration

mcal	millicalorie
min	minute
mm	millimeter
N	normal concentration
NMR	nuclear magnetic resonance
NR	nucleation rate
n	number
nm	nanometer
ns	nanosecond
P	pressure
ΔP	plasticizer differential
Pa	Pascal
Pa s	Pascal second
PEG	poly(ethylene glycol)
PHC	polyhydroxy compound
PPG	poly(propylene glycol)
PVAc	poly(vinyl acetate)
PVC	poly(vinyl chloride)
PVP	poly(vinyl pyrrolidone)
p	vapor pressure
p°	vapor pressure of pure liquid water
pH	-log of the hydronium ion concentration in aqueous solution
pK	-log of the equilibrium dissociation constant
p/p°	relative vapor pressure
ps or psec	picosecond
Q_{10}	rate expression associated with Arrhenius kinetics
R	gas constant
R.H. or RH	relative humidity
%RH	percent relative humidity
RNase	ribonuclease
RT	room temperature
RVP	relative vapor pressure
r	linear correlation coefficient
S	solute
SHP	starch hydrolysis product
SSL	sodium stearyl lactylate
s or sec	second
T	temperature
TADS	thermal analysis data station
% TM	percent total moisture

TMA	thermomechanical analysis
ΔT	temperature differential (e.g. $T - T_g$)
T_a	annealing temperature
T_{am}	"antemelting" transition temperature
T_c	collapse transition temperature
T_{cr}	crystallization temperature
T_d	devitrification temperature
T_e	eutectic melting temperature
T_{exp}	experimental temperature
T_f	freezer temperature
T_{fr}	flow relaxation temperature
T_g	glass transition temperature
T_g'	subzero glass transition temperature of the amorphous solute/ unfrozen water matrix surrounding the ice crystals in a maximally freeze-concentrated aqueous solution
T_g/T_m	ratio of T_g to T_m
T_{gel}	gelation temperature
T_{gelat}	gelatinization temperature
T_h	homogeneous nucleation temperature
T_h/T_m	ratio of T_h to T_m
T_{im}	"insipient melting" temperature
T_{liq}	liquidus temperature
T_m	crystalline melting temperature
T_m/T	reduced temperature
T_m/T_g	ratio of T_m to T_g
T_m/T_h	ratio of T_m to T_h
T_r	recrystallization temperature
T_s	sorption temperature
T_{sol}	solidus temperature
T_{sp}	sticky point temperature
T_{vap}	vaporization temperature
t	time
UFW	unfrozen water
V	volume
V°	partial molar volume
V-type	polymorphic crystalline form of starch
vs.	versus
W	water content
ΔW	water content differential (e.g. $W - W_g$)
WBC	"water-binding capacity"

W_g	content of plasticizing water in an aqueous glass at its T_g
W_g'	content of plasticizing water in an aqueous glass at its T_g'
WLF	Williams-Landel-Ferry
W_s	water content at T_s
w	weight (or mass) fraction
w/w or w:w	composition of a mixture, expressed as a weight ratio
w% or wt%	weight percent concentration
w% C	weight percent concentration
x	mole fraction concentration
x_i	mole fraction concentration of component i
x_s	mole fraction concentration of solute
x_w	mole fraction concentration of water
η	viscosity
η_e	viscosity at T_e
η_g	viscosity of a glass at its T_g
η_{gel}	viscosity at T_{gel}
ρ	density
μ	chemical potential
μ_i	chemical potential of component i
μ_w^o	chemical potential of water
μ_{cal}	microcalorie
μ_m	micrometer
ρ_g	density of a glass at its T_g
ϕ	osmotic coefficient
ψ	water potential
τ	relaxation time
τ_{rot}	rotational relaxation time
%	percent
=	equal to
≡	essentially identical to
≈	about
≅	about equal to
>	greater than
<	less than
≥	greater than or equal to
≤	less than or equal to
≳	greater than about
≲	less than about
≫	much greater than
≪	much less than
/	per