

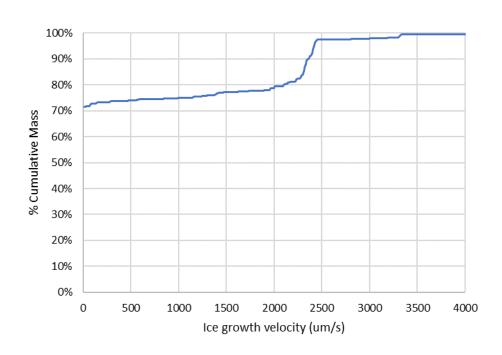
# Simulation report

Type of Freezer: Conventional/Radial freezer (e.g., CoolCell®)

Biomixture: DMSO + Culture medium

Mass fraction of DMSO: 0.1 Cooling rate (°C/min): 1

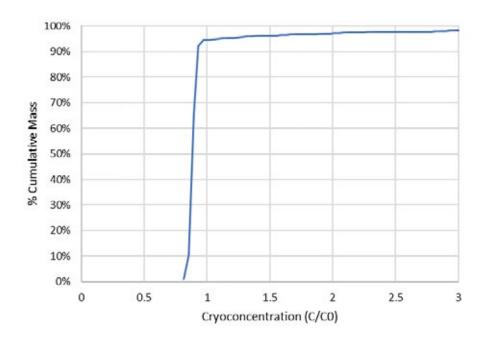
### Ice growth velocity (µm/s)



**Figure 1:** Cumulative mass distribution of ice growth velocity (μm/s)

#### Cryoconcentration ( $C/C_0$ )

Cryoconcentration is defined as the ratio of solute concentration after freezing (C) and initial solute concentration ( $C_0$ ).



**Figure 2:** Cumulative mass distribution of cryoconcentration ( $C/C_0$ )

#### Freezing stress-time (min)

Freezing stress-time is defined as the time that a cell spends between the freezing temperature ( $T_f$ ) and the vitrification temperature ( $T_g$ ').

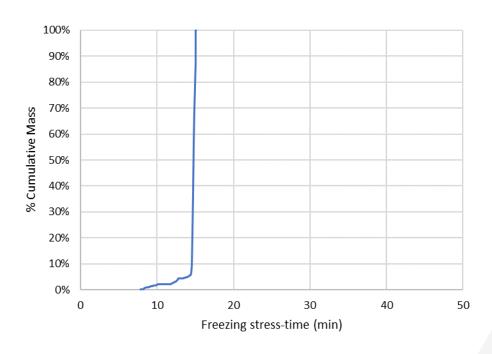


Figure 3: Cumulative mass distribution of freezing stress-time (min)

#### PRECISION CRYOSYSTEMS

## For more informations or technical support:

Please contact SMARTFREEZ by the following e-mails:

info@smartfreez.com support@smartfreez.com

Our engineers will get back to you.

www.smartfreez.com

