

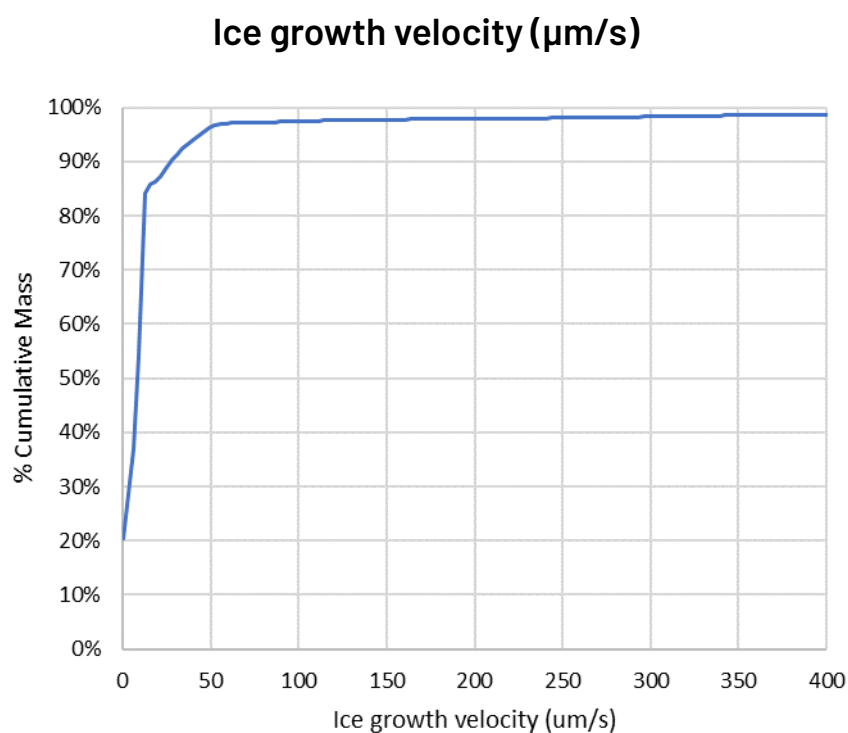
# Simulation report

**Type of Freezer:** CELL (SmartFreez's unidirectional CRF)

**Biomixture:** DMSO + Culture medium

**Mass fraction of DMSO:** 0.05

**Cooling rate (°C/min):** 1

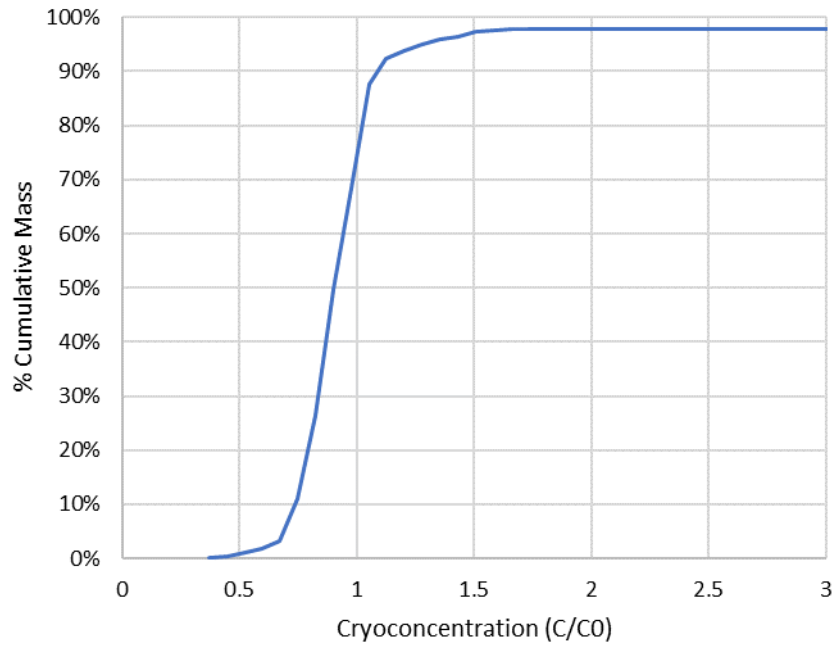


**Figure 1:** Cumulative mass distribution of ice growth velocity ( $\mu\text{m/s}$ )



### Cryoconcentration ( $C/C_0$ )

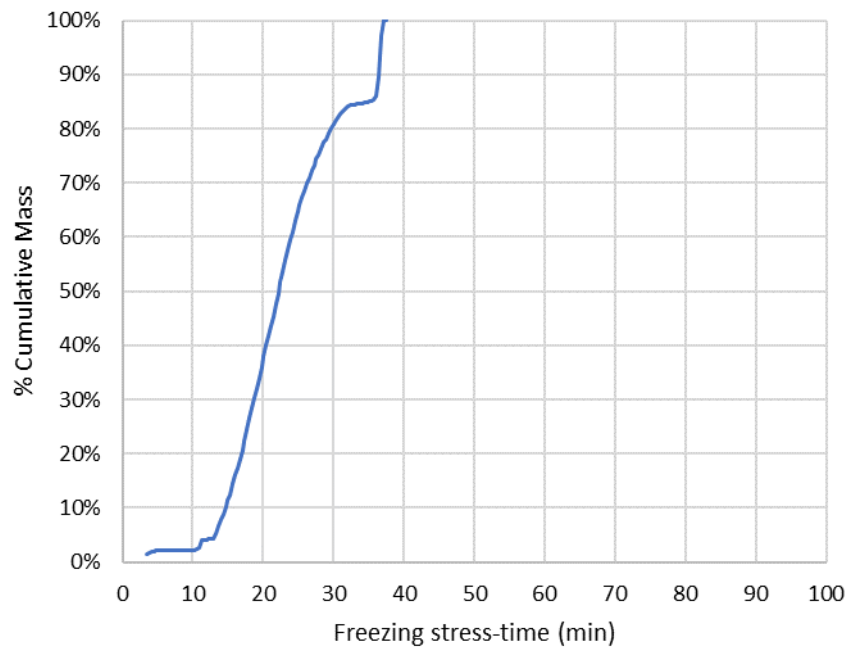
Cryoconcentration is defined as the ratio of solute concentration after freezing ( $C$ ) and initial solute concentration ( $C_0$ ).



**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:***

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Our engineers will get back to you.

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