



## STABILITY test of the cell culture media

**Thermo Fisher Scientific** has performed an excursion/stability study on three liquid media products: **DMEM/F12, DMEM and RPMI 1640**. These are the basal media that are frequently manufactured and contain some of the most heat-labile components relative to other standard formulations. Stability indicating assays were used to assess the acceptability of the products after excursions. The testing included specification testing of pH, osmolality and solubility. In addition, amino acids, water soluble vitamins, putrescine and performance were tested as applicable. The data for these catalog products is shown below for the excursion conditions of -10 to -20°C, 20 to 25°C and 30 to 35°C. After excursions of 48 and 96 hours as well as 11 days all products met specifications. Additionally, results were within specification through the testing/time points shown below. It is up to the end user to determine the relevance of this data suitable for their applications.

	DMEM/F12			DMEM			RPMI		
Time point	13 m after 50 d	13 m after 50 d	6 w after 96 h	6 w after 96 h	13 m after 50 d	6 w after 96 h	13 m after 50 d	12 w after 96 h	11 d
Temperature Condition	-10 to -20 <sup>oC</sup>	25 to 25 <sup>oC</sup>	30 to 35 <sup>oC</sup>	-10 to -20 <sup>oC</sup>	25 to 25 <sup>oC</sup>	30 to 35 <sup>oC</sup>	-10 to -20 <sup>oC</sup>	-10 to -20 <sup>oC</sup>	30 to 35 <sup>oC</sup>
pH	7.4	7.4	7.4	7.4	7.4	7.4	7.2	7.2	7.2
Osmolality (mOsm/kg)	308	309	309	341	344	345	278	278	278
Solubility	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Amino Acid Quantitative	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Water Soluble Vitamins Quantitative	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Putrescine (% theoretical)	92.6	88.9	90.6	NT	NT	NT	NT	NT	NT
SP2 Toxicity (%)	95	88	100	NT	NT	NT	94	113	90
Performance	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

m: months, w: weeks, d: days, h, hours, NT: not tested

