

Specifications of APTech's 2'-FL

Parameters	Specification	Method
Appearance (Color)	White to off white/ivory	Visual
Appearance (Form)	Dry powder	Visual
Solubility in water	500 g/L (25°C)	Visual
Appearance in solution	Clear, colorless to slightly yellow	Visual
Chemical		
Water content, %	≤ 9.0	Karl Fischer titration
Protein content, µg/g	≤ 100	Bradford assay
Ash, %	≤ 0.5	MFDS No.2018-98, 8.2.1.2
Arsenic, mg/kg	≤ 0.1	KS C IEC 62321-4 (2014), KS C IEC 62321-5 (2014), KS I ISO 17294:2014
Cadmium, mg/kg	≤ 0.01	
Lead, mg/kg	≤ 0.02	
Mercury, mg/kg	≤ 0.05	
Carbohydrate content		
2'-Fucosyllactose, %	≥ 94	HPAEC-PAD
Lactose, %	≤ 5 (Area)	
3-Fucosyllactose, %	≤ 5 (Area)	
Difucosyllactose, %	≤ 5 (Area)	
Fucosyl-Galactose, %	≤ 3 (Area)	
Glucose, %	≤ 3 (Area)	
Galactose, %	≤ 3 (Area)	
Fucose, %	≤ 3 (Area)	
Microbiology analysis		
Standard Plate Count, cfu/g	≤ 500	MFDS No.2018-98, 8.4.5.1
Yeast and Mold, cfu/g	≤ 100	MFDS No.2018-98, 8.4.10
Coliform, cfu/g	≤ 10	MFDS No.2018-98, 8.4.7.2
<i>E. coli</i> , cfu/g	Absent in 1 g	MFDS No.2018-98, 8.4.8.2
<i>Cronobacter</i> spp.	Absent in 60 g	MFDS No.2018-98, 8.4.21
<i>Staphylococcus aureus</i> , cfu/g	Absent in 1 g	MFDS No.2018-98, 8.4.12.2
<i>Salmonella</i> spp.	Absent in 25 g	MFDS No.2018-98, 8.4.11
<i>Bacillus cereus</i> , cfu/g	≤ 10	MFDS No.2019-81, 8.4.18.2
<i>Clostridium perfringens</i>	Absent in 25 g	MFDS No.2019-81, 8.4.14.1
<i>Listeria monocytogenes</i>	Absent in 25 g	MFDS No.2019-81, 8.4.15
Sulphite reducing clostridia spores, cfu/g	≤ 30	BS ISO 15213-2003
Endotoxins, EU/g	≤ 100	Ph. Eur. 2.6.14
Abbreviations: MFDS = Ministry of Food and Drug Safety; KS = Korean Industrial Standards; IEC = International Electrotechnical Commission; ISO = International Organization for Standardization; HPAEC-PAD = High Performance Anion Exchange Chromatography Pulsed Amperometric Detection; cfu = colony forming units; Ph. Eur = European Pharmacopoeia		