

**DESIGN YOUR EXPERIMENT BY MEANS OF A CENTRAL COMPOSITE DESIGN****CCD TEMPLATE FOR 3 VARIABLES AT 5 LEVELS:**

		A	B	C
Cube points	1	-1	-1	-1
	2	-1	-1	+1
	3	-1	+1	-1
	4	-1	+1	+1
	5	+1	-1	-1
	6	+1	-1	+1
	7	+1	+1	-1
	8	+1	+1	+1
Central point	9	0	0	0
Star points	10	0	0	-2
	11	0	0	+2
	12	0	-2	0
	13	0	+2	0
	14	-2	0	0
	15	+2	0	0
Central points	16	0	0	0
	17	0	0	0

**EXAMPLE: FOOD SURFACE DECONTAMINATION**

**Objective of the experiment:** Development of a biopreserving solution for food surface decontamination

**Microbiological target:** *Listeria monocytogenes*

**Growth phase:** stationary (sub-cultured twice)

**Level of inoculum:** 50 CFU/cm<sup>2</sup>

**Inoculation area:** surface of finished product

**Independent variables:**

**NaCl (g/100 mL):** 0, 0.50, 1.00, 1.50, 2.00

**pH:** 7.0, 6.5, 6.0, 5.5, 5.0

**Myrtle extract (ME) (mL/100 mL):** 0.039, 0.78, 0.117, 0.156, 0.195

RUN	NaCl (g/100 mL)	pH	ME (mL/100 mL)
1	1.50	6.50	0.156
2	0.50	6.50	0.156
3	1.50	6.50	0.078
4	0.50	6.50	0.078
5	1.50	5.50	0.156
6	0.50	5.50	0.156
7	1.50	5.50	0.078
8	0.50	5.50	0.078
9	1.00	6.00	0.117
10	1.00	7.00	0.117
11	1.00	5.00	0.117
12	1.00	6.00	0.195
13	1.00	6.00	0.039
14	2.00	6.00	0.117
15	0.00	6.00	0.117
16	1.00	6.00	0.117
17	1.00	6.00	0.117

**YOUR PRODUCT: BEEF SALAMI (DRY-CURED SAUSAGE)****Objective of the experiment:****Microbiological target:****Growth phase:****Level of inoculum:****Inoculation area:****Independent variables:**

