

1 **Supplementary Table 1 Composition of diets (AOAC, 1984)**

Diet	Basal diet	Type of diet	Basal diet	Diet	Basal diet
Component	Quantity (g/100g)	Component	Quantity (g/100g)	Component	Quantity (g/100g)
Starch	53	Vitamin mixture	1.0	Fat	7.0
Casein	20	Mineral mixture	3.5	Cellulose	5.0
Sucrose	10	Choline chloride	0.2	Methionine	0.3

2 **Composition of vitamin mixture**

Vitamin mixture	Quantity (mg/100 gm)	Vitamin mixture	Quantity (mg/100 gm)	Vitamin mixture	Quantity (mg/100 gm)
Vitamin A	2000 IU	Ca-D-Pantothenate	4.0 mg	Mesoinositol	10 mg
Vitamin D	200 IU	Riboflavin	0.8 mg	Niacin	4.0 mg
Vitamin K	0.5 mg	Thiamin-HCl	0.5 mg	Biotin	0.04 mg
Choline chloride	200 mg	Pyridoxin-HCl	0.5 mg	Vitamin B ₁₂	0.003 mg
PABA	10 mg	Folic acid	0.2 mg		

3 **Composition of mineral mixture**

Salt Mixture	Quantity (gm/kg)	Salt Mixture	Quantity (gm/kg)	Salt Mixture	Quantity (gm/kg)
KH ₂ PO ₄	389gm	ZnSO ₄ .7H ₂ O	0.548 gm	FeSO ₄ .7H ₂ O	27gm
MgSO ₄	57.3 gm	CuSO ₄ .5H ₂ O	0.477 gm	MnSO ₄ .H ₂ O	4.1 gm
CaCO ₃	381.4gm	CoCl ₂ .6H ₂ O	0.023 gm	NaCl	139.3 gm
KI	0.79 gm				

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Supplementary Table 2

S. No.	Groups	Basal Diet*	Treatment*	Zinc [#]	Duration of Treatment
1	BD	200g	NA	NA	Every day up to 3 weeks after zinc deficiency along with triple distilled drinking water <i>ad libitum</i>
2	MILK	100g	100g	NA	Every day up to 3 weeks after zinc deficiency along with triple distilled drinking water <i>ad libitum</i>
3	DAHI	100g	100g	NA	Every day up to 3 weeks after zinc deficiency along with triple distilled drinking water <i>ad libitum</i>
4	ZED	100g	100g	15ppm	Every day up to 3 weeks after zinc deficiency along with triple distilled drinking water <i>ad libitum</i>
5	ZEP	100g	100g	15ppm	Every day up to 3 weeks after zinc deficiency along with triple distilled drinking water <i>ad libitum</i>
6	ZS	200g	NA	15ppm	Every day up to 3 weeks after zinc deficiency along with triple distilled drinking water <i>ad libitum</i>

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Note:

10 *Per kg body weight
11 [#]Per 100g of diet

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13 **BD:** As per the AOAC Supplementary table 1

14 **Milk:** Whole milk containing 13% total solids (TS). [TS= Fat 4% + SNF 9%].

15 **DAHI:** Culture used for dahi preparation-*Streptococcus thermophilus* NCDC074 which contains approx.0.9 % of lactic acid as per the titration method.

17 **ZED:** Culture used for dahi preparation-*Streptococcus thermophilus* NCDC074 enriched with zinc (please refer material and method section for zinc enrichment)

19 **ZEP:** Culture used for probiotic dahi preparation *Lactobacillus rhamnosus* NCDC 610 and *Streptococcus thermophilus* NCDC074 enriched with zinc (please refer material and method section for zinc enrichment)

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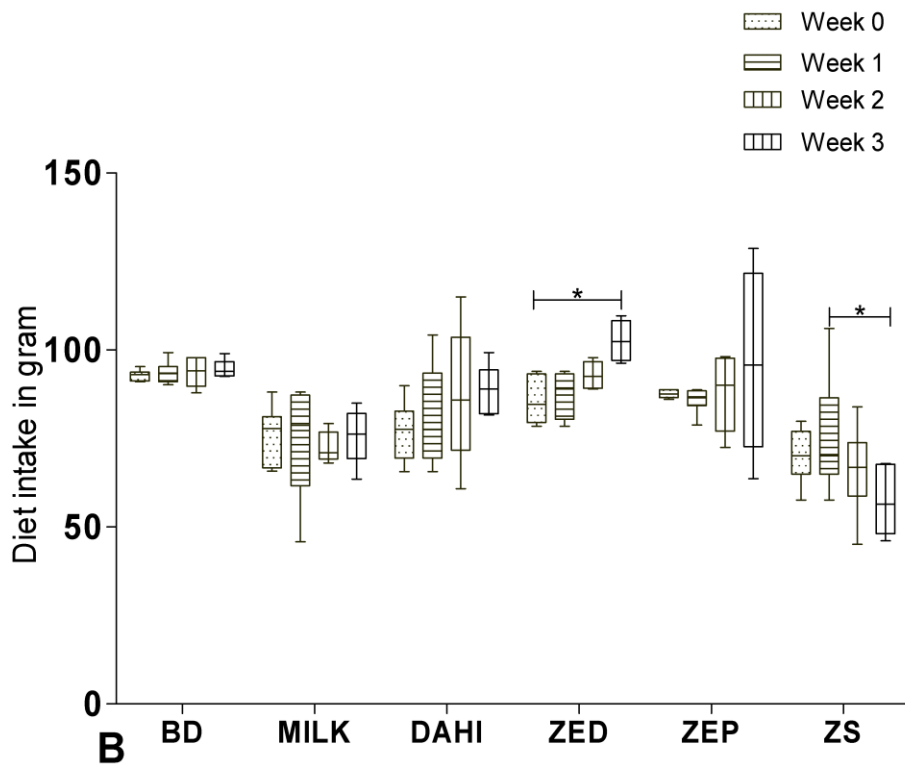
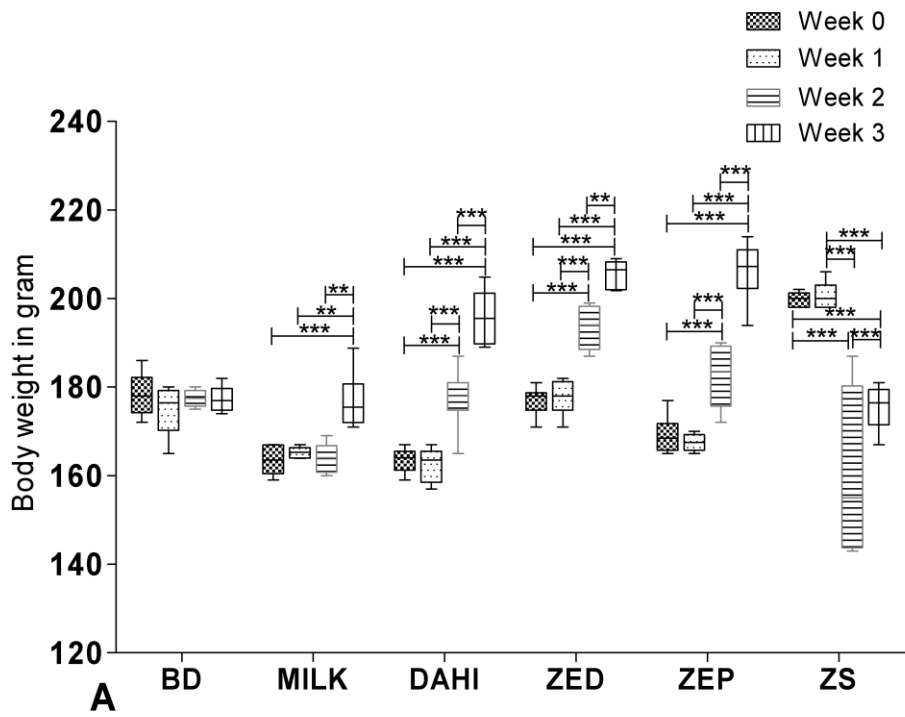
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28 **Supplementary Table 3. *Lactobacillus fermentum* SR4 biomass and zinc content**

Trials	Biomass obtained (g)	Zinc content (mg/ g)
1	36.5	1.69
2	36.4	1.69
3	37.1	1.69
Total	110	1.69

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