Table 1) Demographic characteristics of subjects based on the research groups (10 subjects in each group)

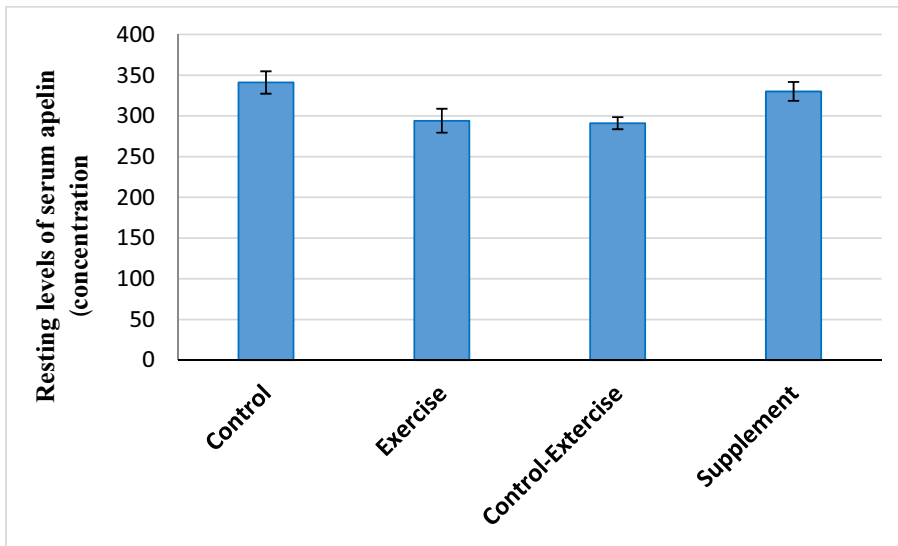|	Control Group	Supplement Group	Training Group	Training and Supplement Group
Age (Year)				
	17.30±0.67	17.40±0.51	17.20±0.63	17.50±0.52
Height (cm)				
	168.60±4.57	172.30±6.48	167.80±5.28	168.80±6.05
Weight (Kg)				
	79.20±6.30	85.00±7.51	80.80±10.22	83.60±8.72
BMI (KG/m^2)				
	27.86±1.99	28.64±2.26	28.63±2.75	29.31±2.33

Figure 1) Comparison of apelin serum concentration in the groups after the exercises (*significant difference with the control group at the level of p　0.05), # significant difference with the cinnamon supplementation p　0.05)
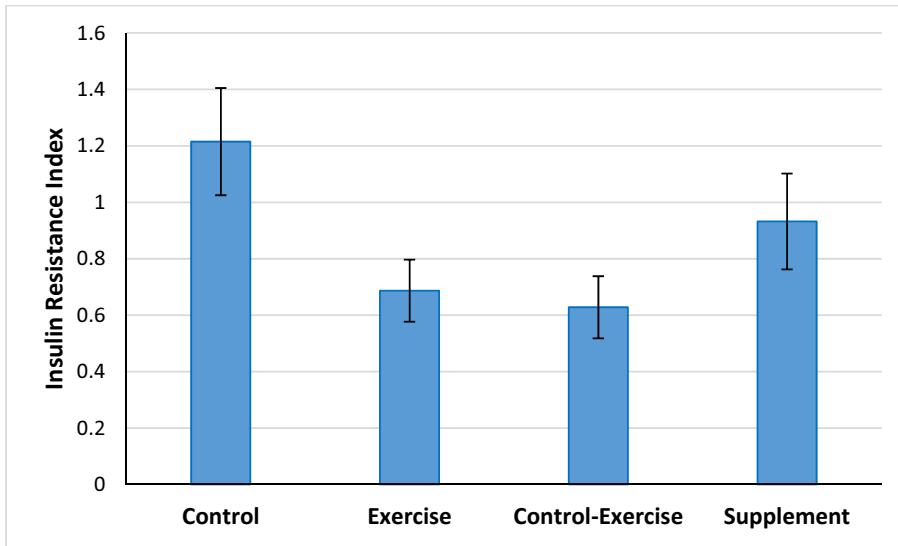
Figure 2) Comparison of insulin resistance index in the groups after the exercises (*significant difference with the control group in the level of p   0.05, #significant difference with the Sinnamon supplementation p   0.05)