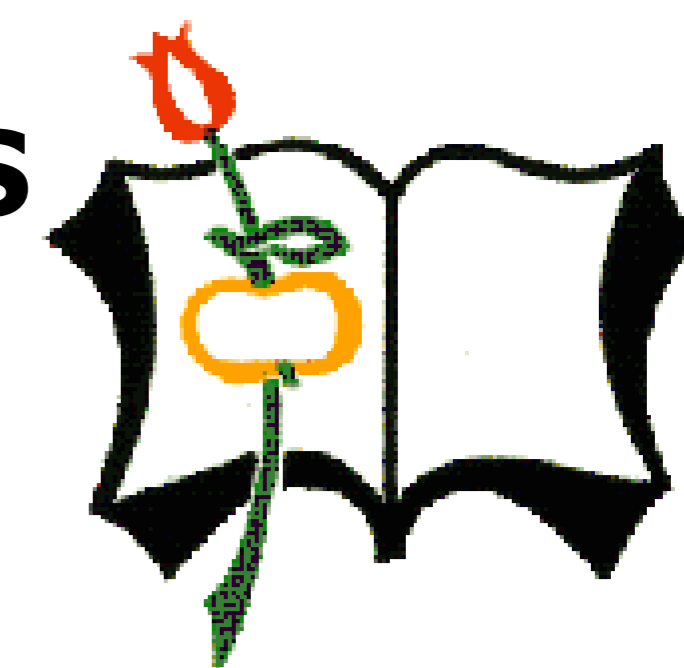




# EFFECT OF *Ocimum basilicum* L. BIOLOGICAL PREPARATION ON TOMATO YIELD AND CAROTENOIDS



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The objective of our investigation was to evaluate the impact of *Ocimum basilicum* L. biological preparation on tomato fruits quality. Three Lithuanian tomatoes cultivars were investigated:

'Laukiai'



'Slapukai BS'



'Viltis'



In the first decade of June tomatoes transplants were planted into the open field. Four different concentrations (dilution level: D6, C30, C200 and 1M) of biological preparation were used six times during tomatoes vegetation in every ten days.

The following parameters determining the quality of tomato fruits were analyzed: carotenoids and lycopene concentrations, fruit weight and the total yield.

Our experiment revealed that quality indices of tomatoes depended on the concentrations of used biological preparation. The highest concentration (1M) of *Ocimum basilicum* L. preparation had no positive effect on tomato fruit quality and total yield.

The spraying solution with C30 and C200 concentrations had increased fruit weight and total yield in all tomatoes cultivars (Fig. 1).

The highest total yield (16.5 kg m<sup>-2</sup>) was determined in cultivar 'Slapukai BS', which was sprayed by biological preparation with C200 concentration (Fig.2).

The highest amount of β-carotene and lycopene was established in tomato fruits affected by *Ocimum basilicum* L. preparation with C30 concentration (Fig.3, 4).

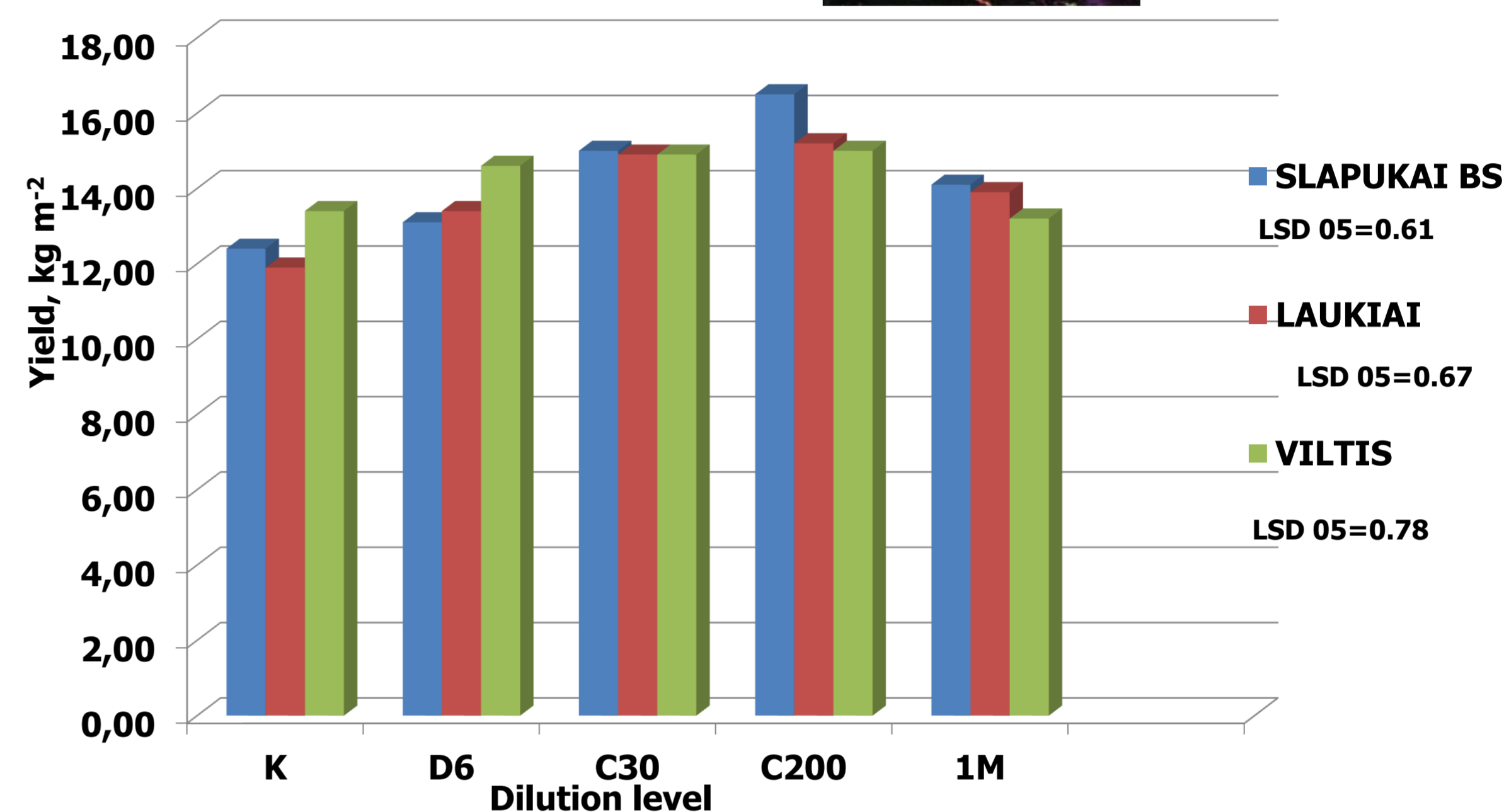


Figure 2. Total yield of tomatoes, kg m<sup>-2</sup>

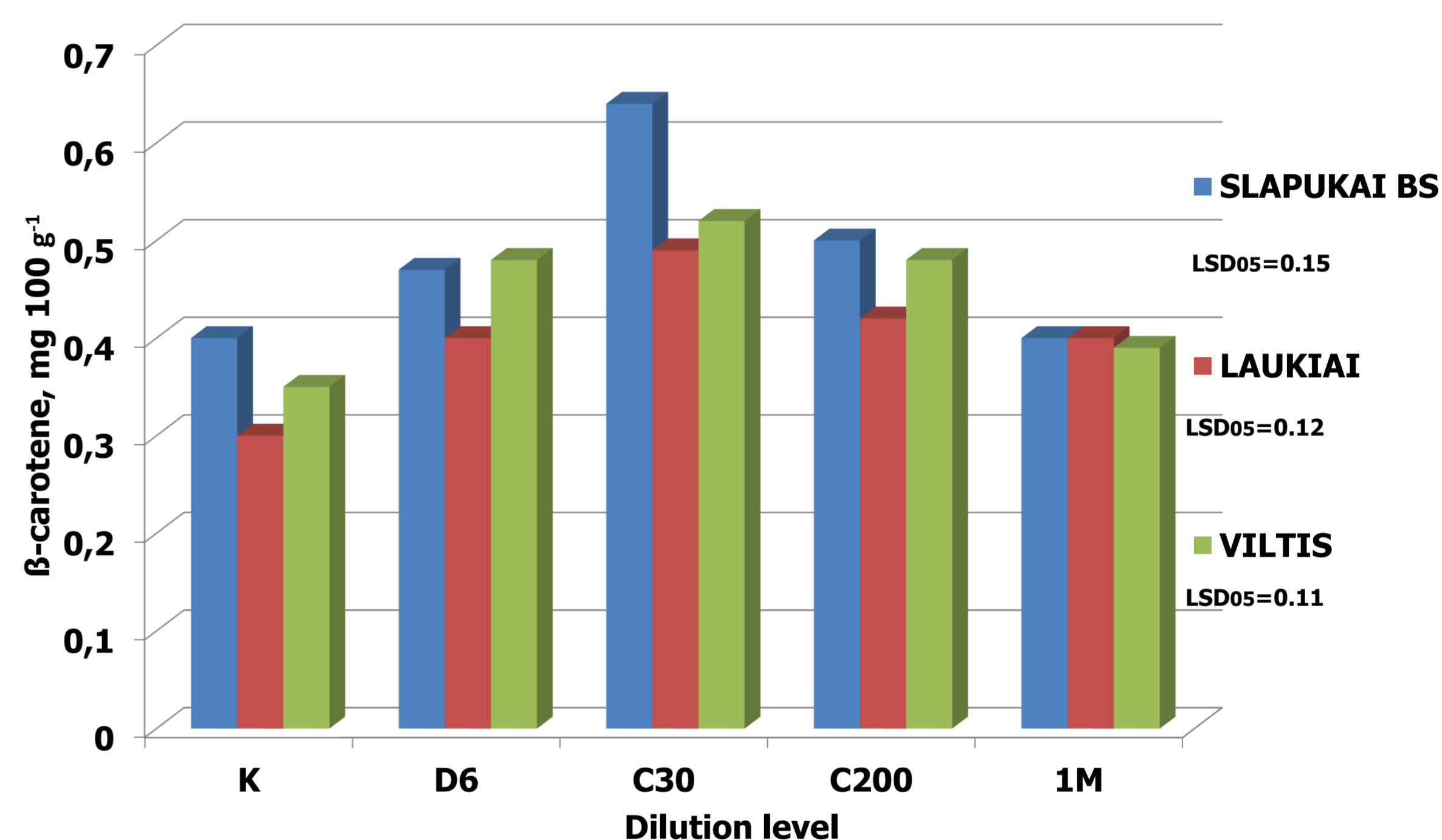


Figure 3. The amount of β-carotene in tomato fruits

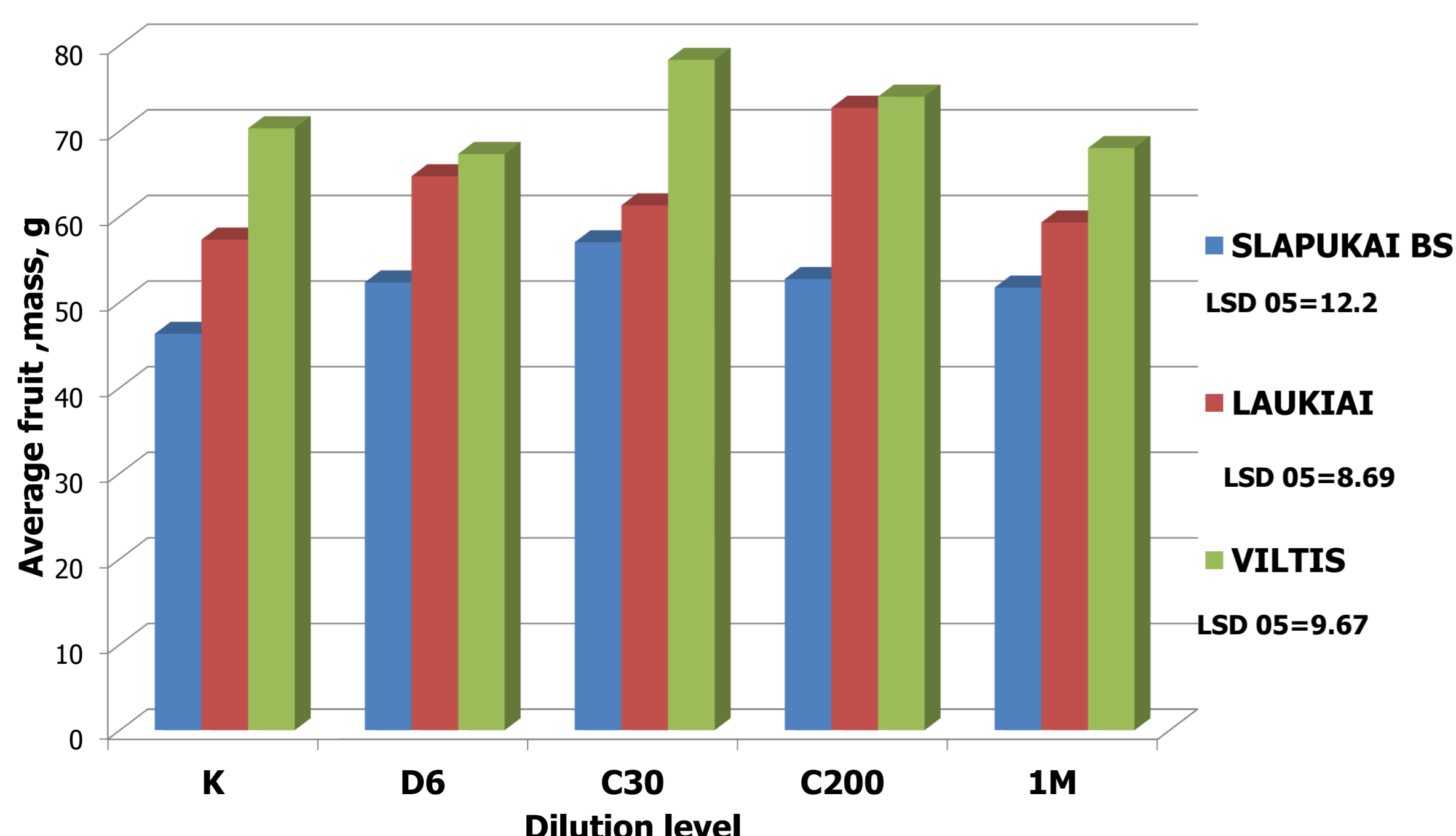


Figure 1. Average fruit mass of tomatoes, g

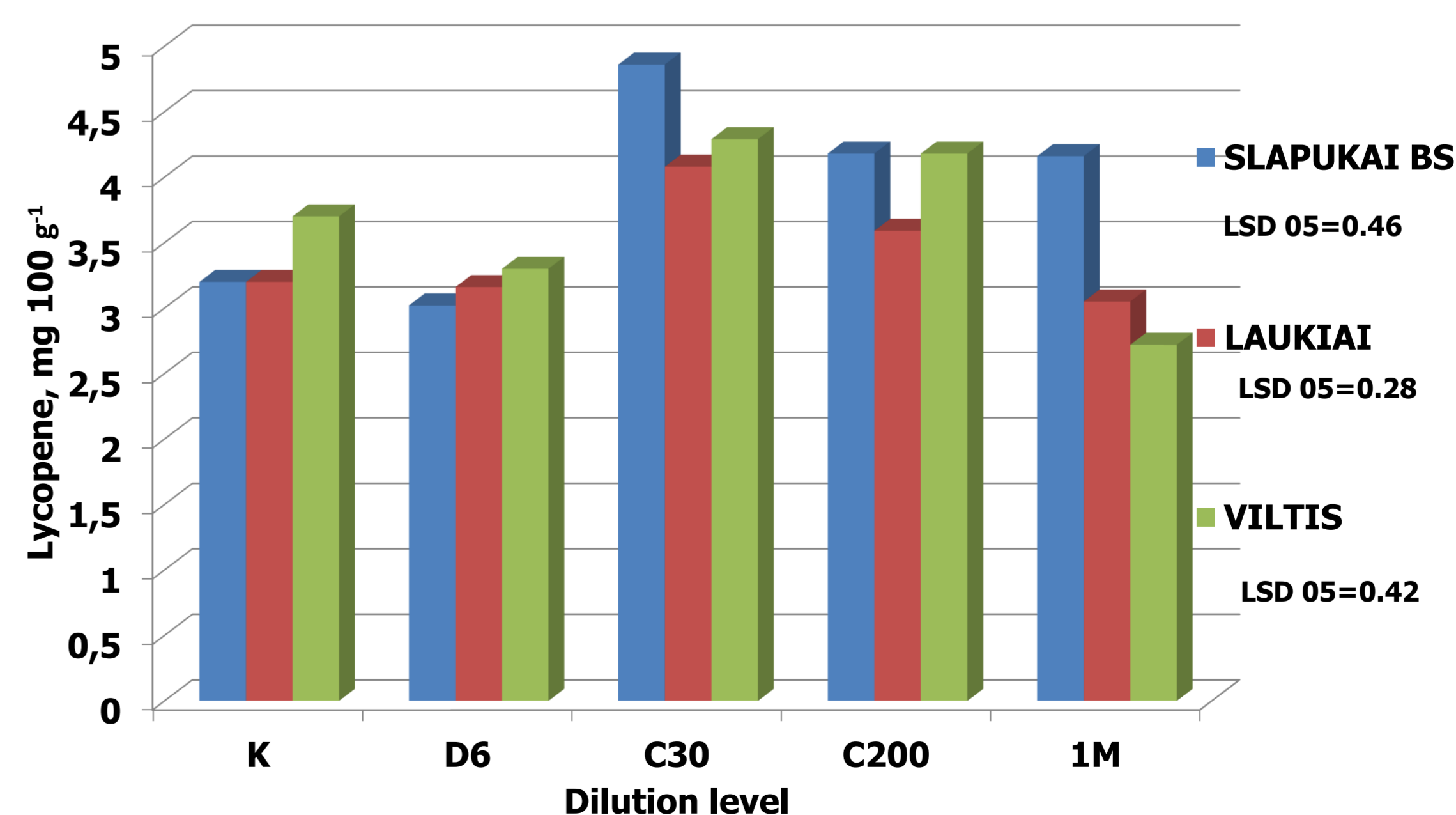


Figure 4. The amount of lycopene in tomato fruits

**Acknowledgement.** This work was supported by a grant from the Research Council of Lithuania, No. SVE-02/2011.