

PORK PATTIES ENRICHED WITH VEGETAL INGREDIENTS TO ENHANCE HEALTH BENEFITS FOR CONSUMERS

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Conclusions

Majorcan Black Pig patties enriched with beta- glucans and polyphenols were obtained with addition of mushrooms and bilberries. These bioactive compounds may provide health benefits for consumers

Introduction



✓ The Porc Negre Mallorquí (PNM, Majorcan Black Pig) is an endangered autochthonous breed from Mallorca Island (González et al; 2013).

✓ Innovations to maintain and expand the market share and availability of traditional pork products from PNM are needed.

The aim of the study was to have high sensory quality pork patties which may provide health benefits for consumers

Results

1. PATTIES CONTENT IN ANTIOXIDANTS AND β-GLUCANS

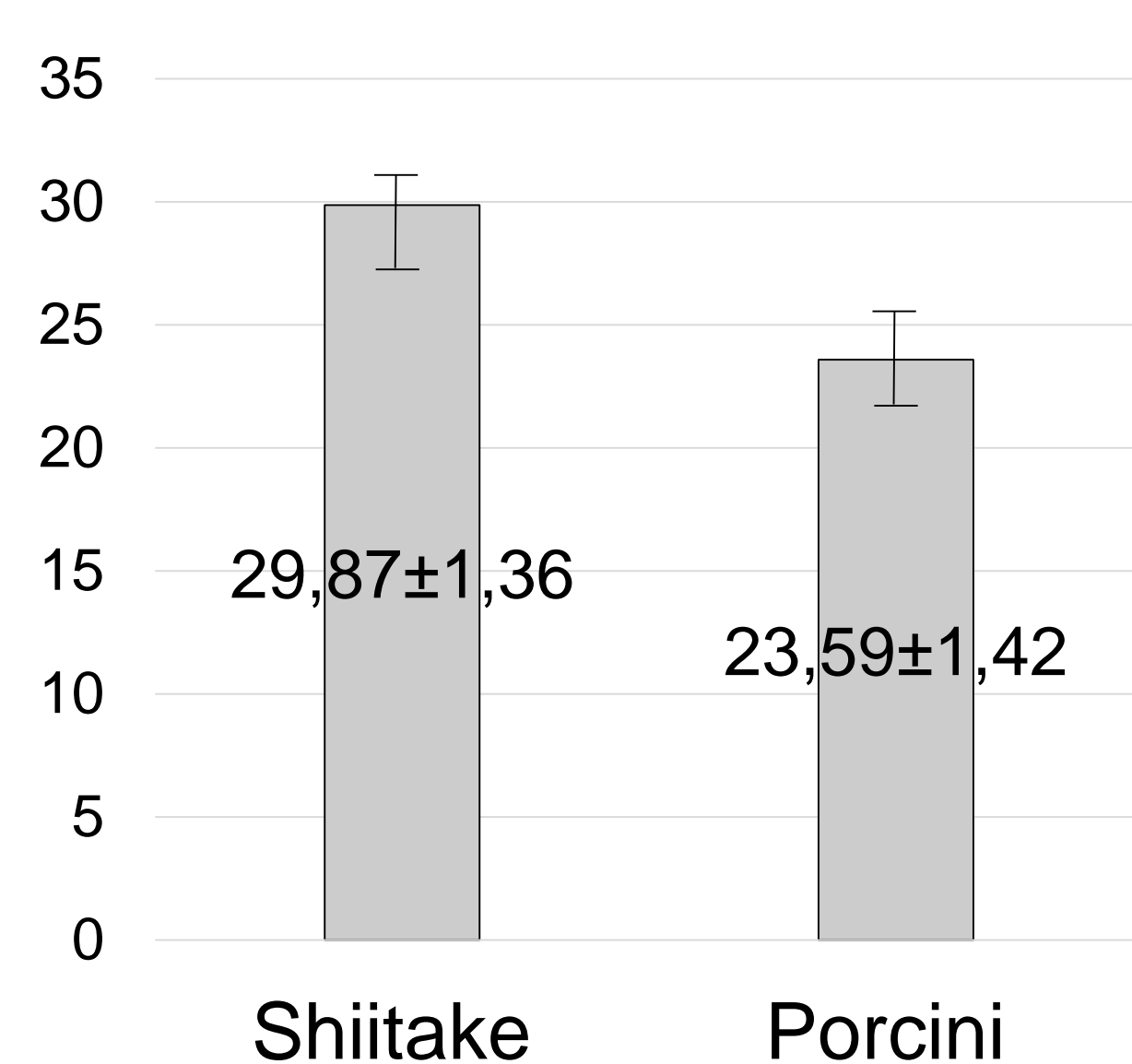


Figure 1. Content of β - glucans (g/100g dehydrated sample, ± SD) in mushrooms.

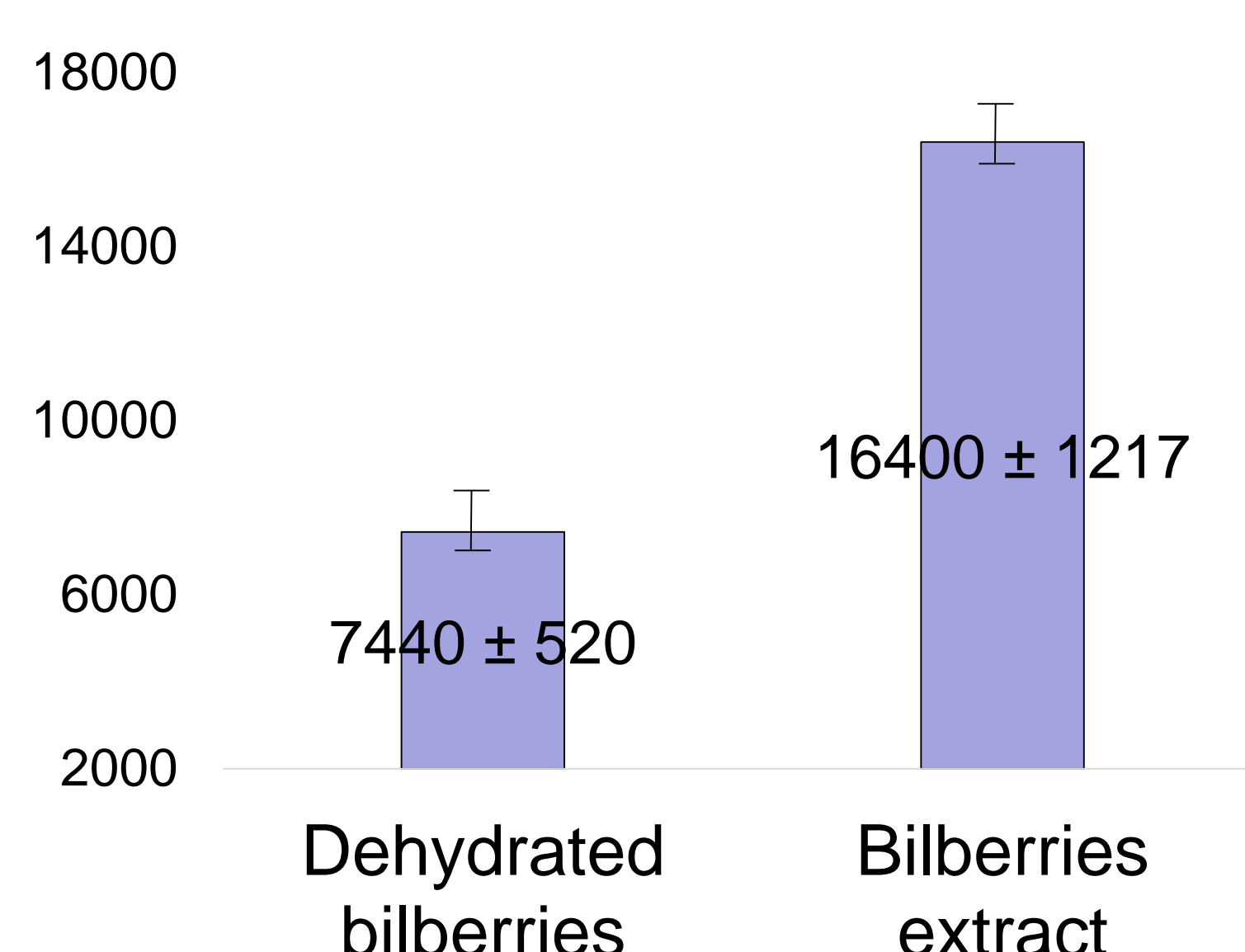


Figure 2: Content of polyphenols (mg acid gallic/ g sample, ± SD)

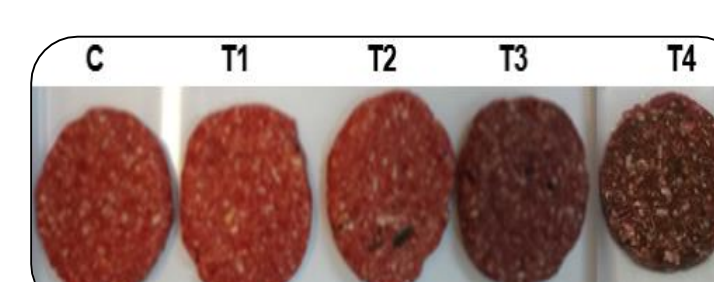
Table 1. Content of polyphenols and β-glucans in PNM patties

Treatment	Vegetal ingredient per kg PNM meat	Functional ingredient per patty (120 g)
T1	10 g shiitake	0.36 g β-glucans
T2	10 g porcini	0.28 g β-glucans
T3	20 g bilberries ²	28.6 mg polyphenols
T4	20 g dehydrated bilberries	17.8 mg polyphenols

²: 10 g dehydrated bilberries + 10 g bilberries extract

Material and Methods

Five types of patties (120g) were prepared using hams and shoulders from PNM: Control PNM meat (C) , and adding : shiitake (T1) , porcini (T2) mushrooms, dehydrated bilberries and bilberries extract (T3), and dehydrated bilberries (T4), (see Table 1).



1. Laboratory analysis:

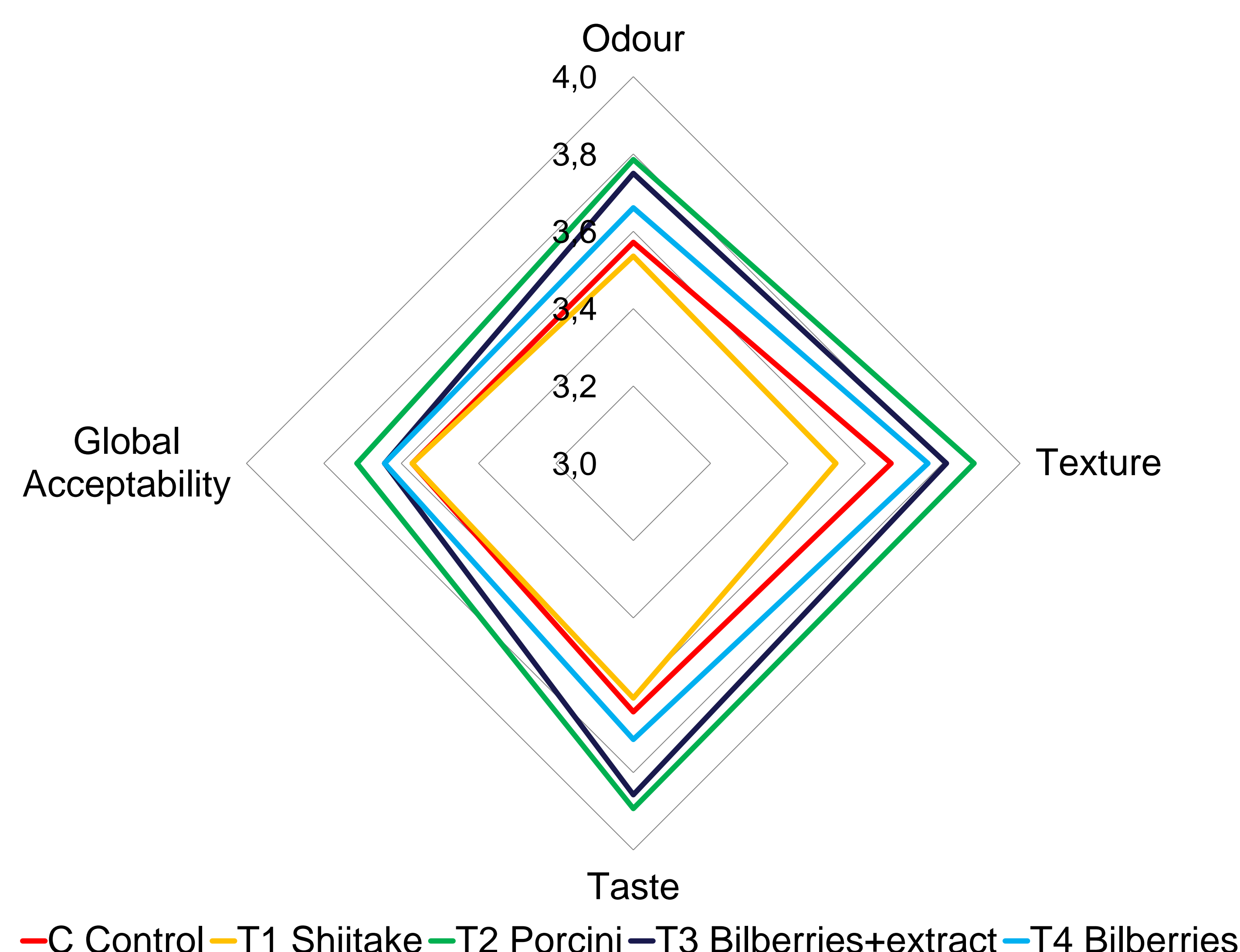
- The total amount of polyphenols from the bilberries was determined by a colorimetric method with gallic acid as standard (Cantin et al.; 2009).
- The % of β-glucans in the mushrooms was evaluated by Megazyme kit K-YBGL09/14.

2. Sensory test:

- A six-member trained panel evaluated the acceptability of the patties, using a 5 point scale. Odour, taste, texture and global acceptability were determined.

2. SENSORY EVALUATION OF PATTIES (TRAINED PANEL)

All evaluations fell between 3 (not like nor dislike) and 4 (like). To better underline the differences between treatments, the data on the radar plot are represented in this range.



The Majorcan Black Pig patties were enriched with 28.6 mg and 17.8 mg of total polyphenols (bilberries) and with 0.36 g and 0.28 g of β-glucans (mushrooms) with respect to the control.