

Introduction

Cocoa origin has a demonstrated effect on cocoa powder properties. Thus, characterize the most common origins of cocoa in a cocoa transformation factory is essential to understand the characteristics of their final products.

Appart from that, cocoa can be alkalisied by treating the cocoa beans, cake or powder with an alkaly dissolved in water at high temperatura and pressure, providing different cocoa powders:

- N: natural cocoa powder (no alkalisied)
- L: light alkalisied cocoa powder
- M: medium alkalisied cocoa powder
- S: strong alkalisied cocoa powder
- US: ultrastrong alkalisied cocoa powder

Objectives

- Prepare cocoa powders with the 5 alkalinization levels (N, L, M, S and US) from cakes of the most common origins employed in the Macao Factory: Ivory Coast, Indonesia and Ghana.
- Study the effect of origin and alkalinization on the physico-chemical and sensory properties of the products.

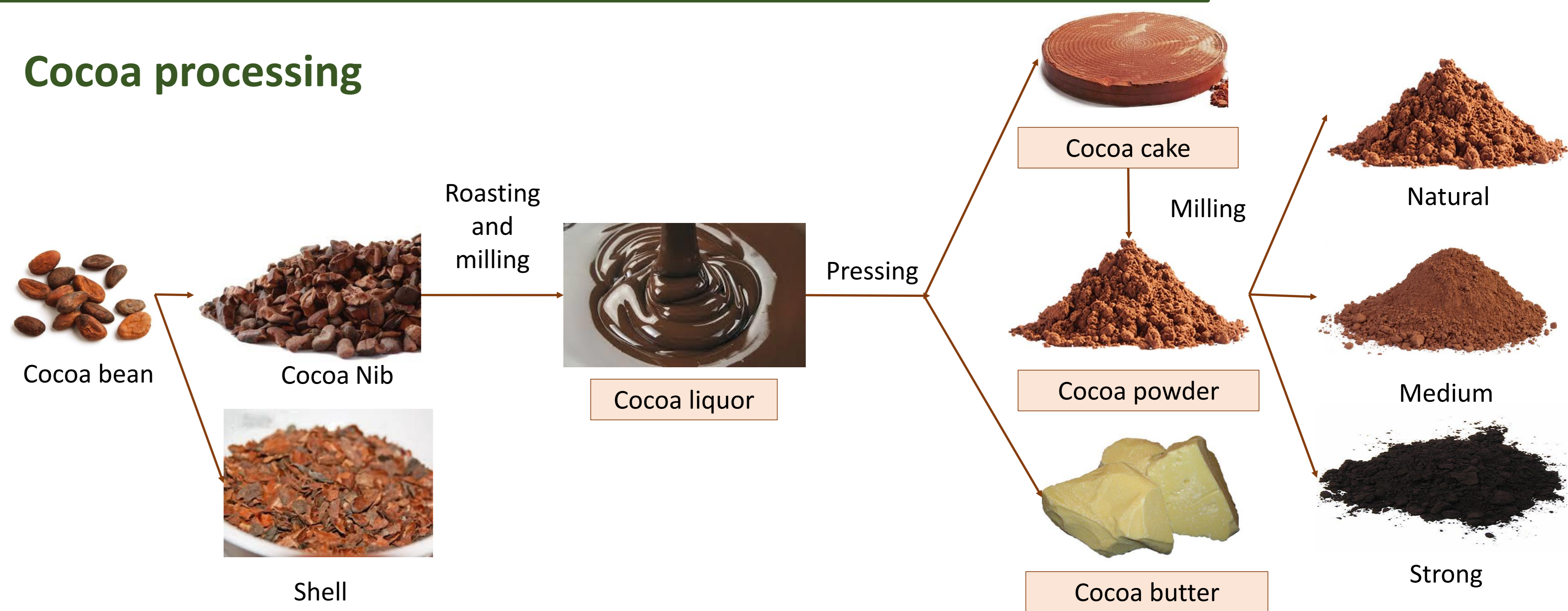
Conclusions

- **Intrinsic color:** Ghana is the lighter product in all the alkalinization degrees. Its chroma is also higher than the others.
- **Buffering capacity:** Ghana origin exhibits the lowest buffering capacity.
- **Soluble matter:** Ghana samples are the most soluble and Indonesia the less soluble.
- **Sensory profile:** Ivory Coast is more chocolaty and Ghana has more acidity. Similar body and cocoa flavour is found among origins.

Acknowledgement

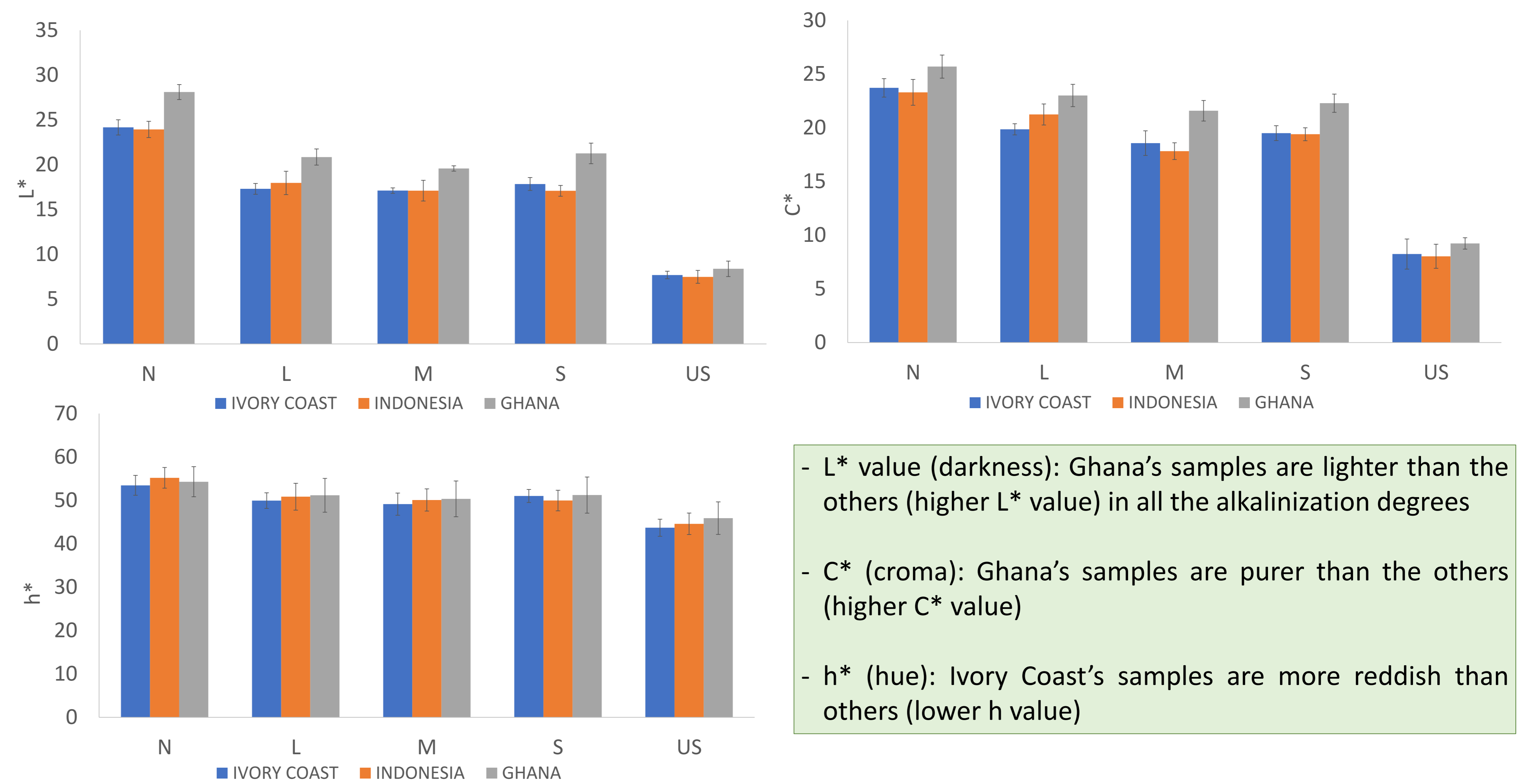
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Cocoa processing

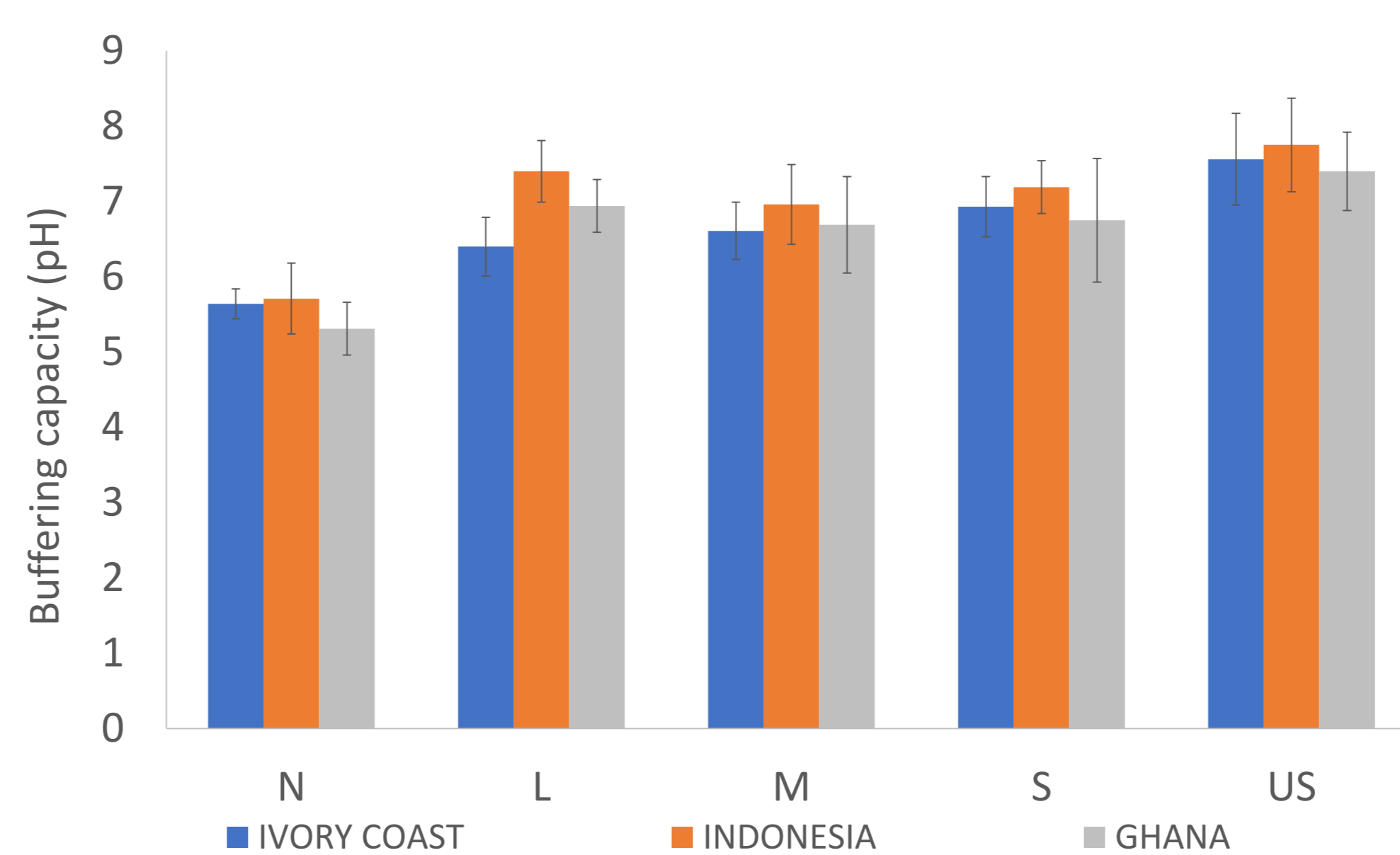


Results

Intrinsic color: color of the cocoa powder in water

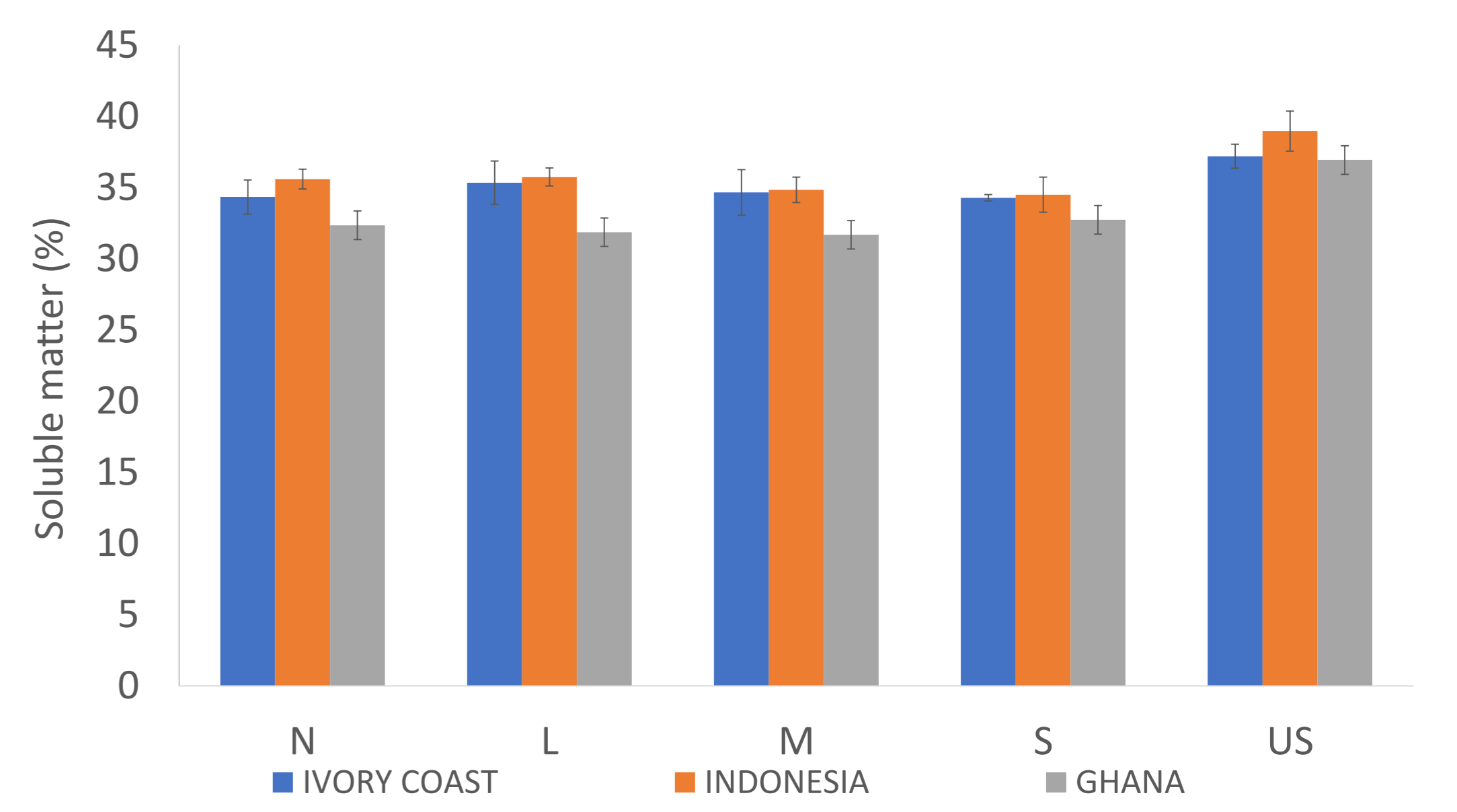


Buffering capacity



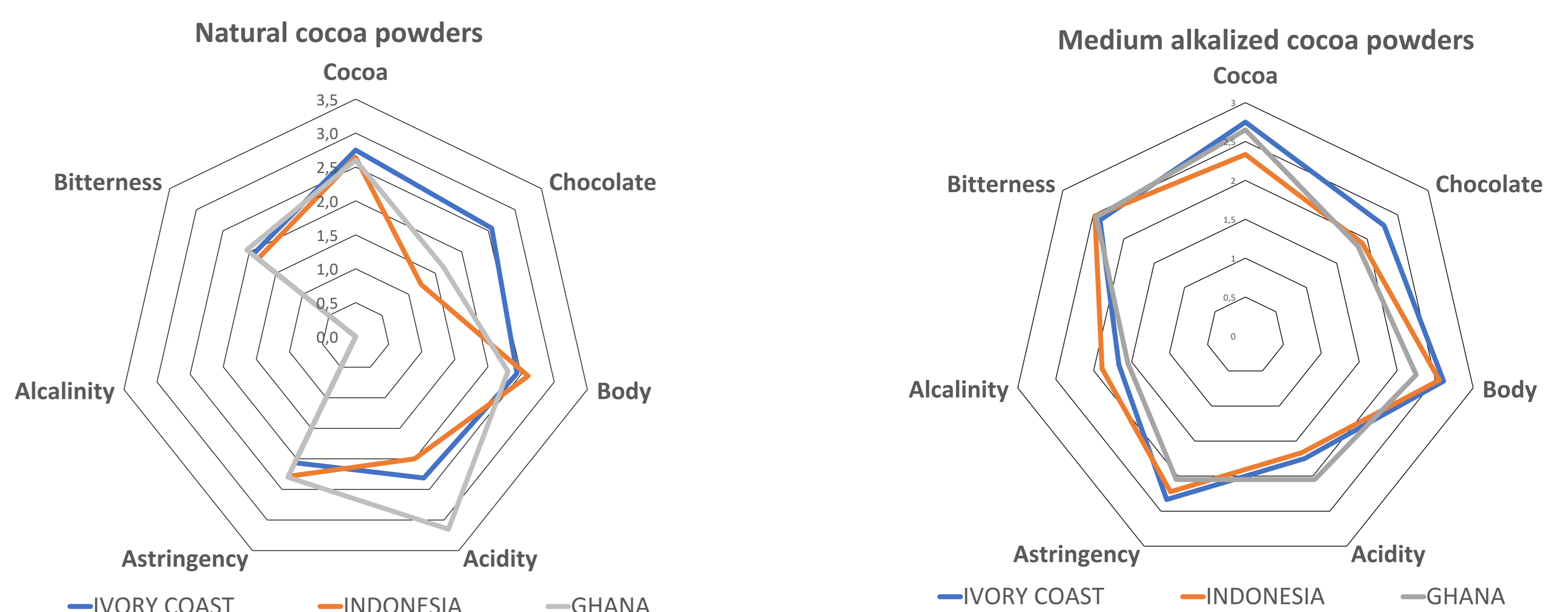
pH in Ghana's samples are always lower than in Ivory Coast or Indonesia Origin.

Soluble matter



Origin of the cocoa powder seems to affect the amount of soluble matter. Indonesia < Ivory Coast <<< Ghana

Sensory



Origin provides more differences in the natural cocoa powders than in the alkalisied. Ghana has more acidity and Ivory Coast more chocolate flavour.