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## Effect of operating parameters on the surface and physico-chemical properties of spray-dried camel milk powders

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Running title: Spray dried camel milk powder

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### Highlights for review

- Camel milk powders exhibit higher bulk densities than cow milk powders
- The solubility of camel milk proteins is retained at lower spray drying temperature
- Fats on the surfaces of camel milk powders interlace many particles one another
- Air flow rate and inlet temperature affect the properties of camel milk powders
- Cyclone recovery is influenced by inlet temperature, total solid and air flow rate

### Abstract

The effect of process variables of spray drying on the surface and physico-chemical properties of camel milk powder was evaluated. A 2<sup>3</sup> full factorial experimental design was used to determine the effects of inlet temperature (200°C, 170°C and 140°C), drying air flow rate (9, 7.5 and 6 m<sup>3</sup>/min) and total solids of skimmed camel milk (40, 24 and 8.2 %) on cyclone recovery and outlet temperature. These variables were found to affect the level of cyclone recovery and outlet temperatures. Cow milk powder was prepared under similar conditions and used for comparison

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