

DEVELOPMENTS OF TECHNOLOGIES FOR MAKING USE OF COFFEE WITH DEFECTS

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INTRODUCTION

What can be done with coffee with defects to compensate for the loss?

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Several alternatives are being mooted and their transformation into economically viable technologies can represent, in the near future, an enormous improvement in the quality of coffee.

OBJECTIVES

To develop technologies to use coffee with defects

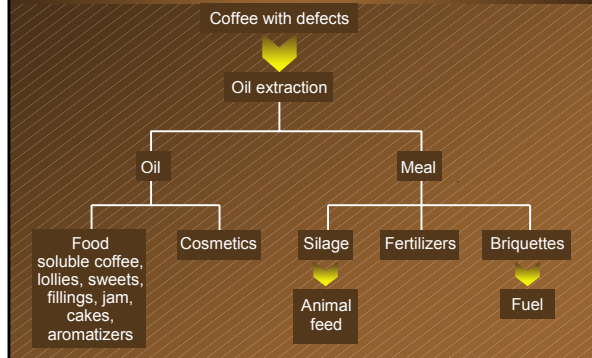
SPECIFIC OBJECTIVES

- Improvement in technology to extract coffee oil;
- Application of coffee oil in food;
- Application of coffee oil in cosmetics;
- Application of coffee residue in animal feed;
- Application of coffee residue as fertilizers;
- Application of coffee residue as fuel (briquettes).

ANALYSIS BEING CARRIED OUT

- Characterization of physico-chemical properties of raw material (moisture, ashes, fibers, proteins, fatty acids, carbohydrates and caffeine);
- Chemical composition of oil and sub products;
- Ochratoxin A content before and after processing;
- Microbiological and sensorial analyses of the products;
- Classification of coffee defects and its influence on the quality of the products obtained;
- Toxicological analysis of the products obtained.

METHODOLOGY



PRELIMINARY RESULTS

Yield of coffee oil

Raw coffee with defects: 1 - 1.5 L/60kg bag

Good raw coffee: 1.8 – 2.5 L/60kg bag

Roasted coffee: 5L/60kg bag

PRELIMINARY RESULTS

Coffee arabica:

Oil content in raw coffee: 12-15%

Unsaponifiable matter in raw coffee: 4-10%

Total sterols content (phytosterols) in raw coffee oil: 487 mg/kg

PRELIMINARY RESULTS

Sterols composition in raw coffee oil (%)

Campesterol: 14.4

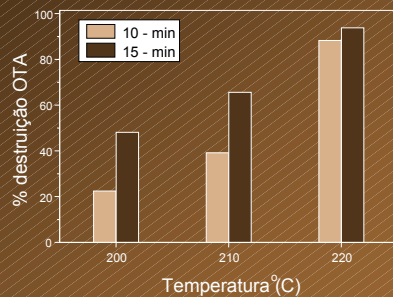
Stigmasterol: 22.6

Beta-sitosterol: 54.8

Delta 5 avenasterol: 3.7

Delta 7 stigmasterol: 4.5

Percentage of OTA destruction during roasting processing



BUDGET

R\$ 270000
US\$ 100000

Period

Year 2002-2004 (3 years)

Team

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