ABSTRACT

Quality Control Analysis of Roasted Coffee Production
(Case Study at Anjosia Coffee, Kemiling District, Bandar Lampung City)

By

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Product quality in the roasted coffee production process is an important factor in maintaining flavor, aroma, and consumer satisfaction. However, defects were still found at several production stages in Anjosia coffee, particularly in the sorting and roasting processes, which may reduce product quality and cause financial losses for the MSME. This condition indicates the need for quality control to identify sources of process deviations and determine appropriate corrective actions. This study aimed to analyze the level of product defects, identify the dominant types of defects, and formulate improvement recommendations for roasted coffee production at Anjosia coffee. The study employed a descriptive method through direct observation, interviews, and production data recording using check sheets at the sorting, roasting, and packaging stages during December 2025 to January 2026. The data were analyzed using the Statistical Process Control (SPC) method with p-charts, Pareto diagrams, and fishbone diagrams. The results showed that at the sorting stage, the dominant defect was partially black beans at 42%, while at the roasting stage the total defect reached 2,472 g, with under-roasted beans as the dominant defect at 2,351 g or 95%. The p-chart results indicated that the proportion of roasting defects on the 3rd day (0.015) and the 7th day (0.018) exceeded the upper control limit, indicating that the process was not statistically under control. Meanwhile, no defects were found at the packaging stage. Fishbone analysis showed that the main causes of defects originated from human, method, and material factors, particularly inconsistencies in manual sorting, lack of supervision, and suboptimal control of roasting temperature and time. Improvement recommendations were focused on developing written SOPs, increasing process supervision, using automatic timers, and routinely evaluating raw material quality.

Keywords:product defects, production process, quality control, roasted coffee, Statistical Process Control.

ABSTRAK

ANALISIS PENGENDALIAN KUALITAS PRODUKSI KOPI *ROASTING* (Studi Kasus di *Anjosia coffee*, Kecamatan Kemiling, Kota Bandar Lampung)

Oleh

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Kualitas produk pada proses produksi kopi *roasting* menjadi faktor penting dalam menjaga cita rasa, aroma, serta kepuasan konsumen. Namun, pada proses produksi kopi *roasting* di *Anjosia coffee* masih ditemukan *defect* pada beberapa tahapan produksi, terutama sortasi dan *roasting*, yang berpotensi menurunkan mutu produk serta menyebabkan kerugian bagi UMKM. Kondisi ini menunjukkan perlunya pengendalian kualitas untuk mengidentifikasi sumber penyimpangan proses dan menentukan tindakan perbaikan yang tepat. Penelitian ini bertujuan untuk menganalisis tingkat kecacatan produk, mengidentifikasi jenis *defect* dominan, serta menyusun rekomendasi perbaikan pada produksi kopi *roasting* di *Anjosia coffee*. Penelitian menggunakan metode deskriptif melalui observasi langsung, wawancara, dan pencatatan data produksi menggunakan check sheet pada tahap sortasi, *roasting*, dan pengemasan selama Desember 2025–Januari 2026. Data dianalisis menggunakan metode *Statistical Process Control* (SPC) dengan alat bantu *p-chart*, diagram Pareto, dan diagram *fishbone*. Hasil penelitian menunjukkan bahwa pada tahap sortasi *defect* dominan berupa biji hitam sebagian sebesar 42%, sedangkan pada tahap *roasting* total *defect* sebesar 2.472 g dengan *defect* dominan biji kurang matang sebesar 2.351 g atau 95%. Hasil *p-chart* menunjukkan proporsi *defect roasting* pada hari ke-3 sebesar 0,015 dan hari ke-7 sebesar 0,018 berada di atas batas kendali atas, sehingga proses belum terkendali secara statistik. Sementara itu, pada tahap pengemasan tidak ditemukan *defect*. Analisis *fishbone* menunjukkan bahwa penyebab utama *defect* berasal dari faktor manusia, metode, dan material, terutama ketidakkonsistenan sortasi manual, kurangnya pengawasan, serta pengendalian suhu dan waktu *roasting* yang belum optimal. Rekomendasi perbaikan difokuskan pada penyusunan SOP tertulis, peningkatan pengawasan proses, penggunaan *timer* otomatis, dan evaluasi mutu bahan baku secara rutin.

Kata Kunci: *Defect* Produk, Kopi *Roasting,* Pengendalian Kualitas, Proses Produksi, *Statistical Process Control*.