

Title (en)  
COLOR SORTING APPARATUS

Publication  
**EP 0342354 A3 19920108 (EN)**

Application  
**EP 89106349 A 19890411**

Priority  
• BR 8801824 A 19880415  
• BR 8801825 A 19880415  
• BR 8801851 A 19880419

Abstract (en)  
[origin: EP0342354A2] An apparatus for sorting objects by color, such as coffee beans, peanuts, beans and other small granular objects. The apparatus includes a means of conveying the objects, uniformly and individually, to the interior of an illuminated analysis chamber that contains one or more sorting channels. Each sorting channel contains at least one lens group connected to photodetectors. The photodetectors are interconnected to electronic circuitry capable of transforming light reflected, transmitted or emitted by the objects into analog electrical signals that are digitized through electrical level detectors. Color analysis of the objects is based on a matrix sorting process that identifies color by comparing the above digitized electrical signals to the contents of a sorting matrix. There is also a matrix apparatus that allows the operator to select, modify, create and display the sorting matrix. There is a means of automatically generating the sorting matrix based on a sampling of electrical signals produced by passing a group of objects with specific color characteristics through the analysis chamber. Microprocessors in a process controller operating on real time are utilized. Adopting the matrix sorting process, this controller classifies objects as acceptable or unacceptable, as well as controlling and supervising all electronic apparatuses linked to the photodetectors. The process controller operates in every sorting channel so as to ensure that article sorting will be based on the matrix process and the sorting matrix.

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CPC (source: EP)  
**B07C 5/3422** (2013.01); **B07C 5/3425** (2013.01)

Citation (search report)  
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• [A] FR 1291802 A 19620427 - MANDREL IND  
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