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## Inherent variation in multiple shoe-sole test impressions

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### Highlights

- Impressions made by the same shoe, differ to some extent from each other.
- It is important to create several test impression from each shoe examined.
- Powder used for impressions might fill in fine scratches and conceal them.
- Fringes on the sole change position in each impression.
- The projection of 3D a shoe-sole to a 2D print causes variations.

### Abstract:

Shoeprints left at crime scenes are seldom perfect. Many prints are distorted or contaminated by various materials. Noisy background often contributes to vagueness on

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