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Glass Identification Data Set

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Abstract: From USA Forensic Science Service; 6 types of glass; defined in terms of their oxide content (i.e. Na, Fe, K, etc)



Data Set Characteristics:	Multivariate	Number of Instances:	214	Area:	Physical
Attribute Characteristics:	Real	Number of Attributes:	10	Date Donated	1987-09-01
Associated Tasks:	Classification	Missing Values?	No	Number of Web Hits:	252878

Source:

Creator:

B. German
Central Research Establishment
Home Office Forensic Science Service
Aldermaston, Reading, Berkshire RG7 4PN

Donor:

Vina Spiehler, Ph.D., DABFT
Diagnostic Products Corporation
(213) 776-0180 (ext 3014)

Data Set Information:

Vina conducted a comparison test of her rule-based system, BEAGLE, the nearest-neighbor algorithm, and discriminant analysis. BEAGLE is a product available through VRS Consulting, Inc.; 4676 Admiralty Way, Suite 206; Marina Del Ray, CA 90292 (213) 827-7890 and FAX: -3189. In determining whether the glass was a type of "float" glass or not, the following results were obtained (# incorrect answers):

Type of Sample -- Beagle -- NN -- DA
Windows that were float processed (87) -- 10 -- 12 -- 21
Windows that were not: (76) -- 19 -- 16 -- 22

The study of classification of types of glass was motivated by criminological investigation. At the scene of the crime, the glass left can be used as evidence...if it is correctly identified!

Attribute Information:

1. Id number: 1 to 214
2. RI: refractive index
3. Na: Sodium (unit measurement: weight percent in corresponding oxide, as are attributes 4-10)
4. Mg: Magnesium
5. Al: Aluminum
6. Si: Silicon
7. K: Potassium
8. Ca: Calcium
9. Ba: Barium
10. Fe: Iron
11. Type of glass: (class attribute)
 - 1 building_windows_float_processed
 - 2 building_windows_non_float_processed
 - 3 vehicle_windows_float_processed
 - 4 vehicle_windows_non_float_processed (none in this database)
 - 5 containers
 - 6 tableware
 - 7 headlamps

Relevant Papers:

Ian W. Evett and Ernest J. Spiehler. Rule Induction in Forensic Science. Central Research Establishment. Home Office Forensic Science Service. Aldermaston, Reading, Berkshire RG7 4PN
[\[Web Link\]](#)

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