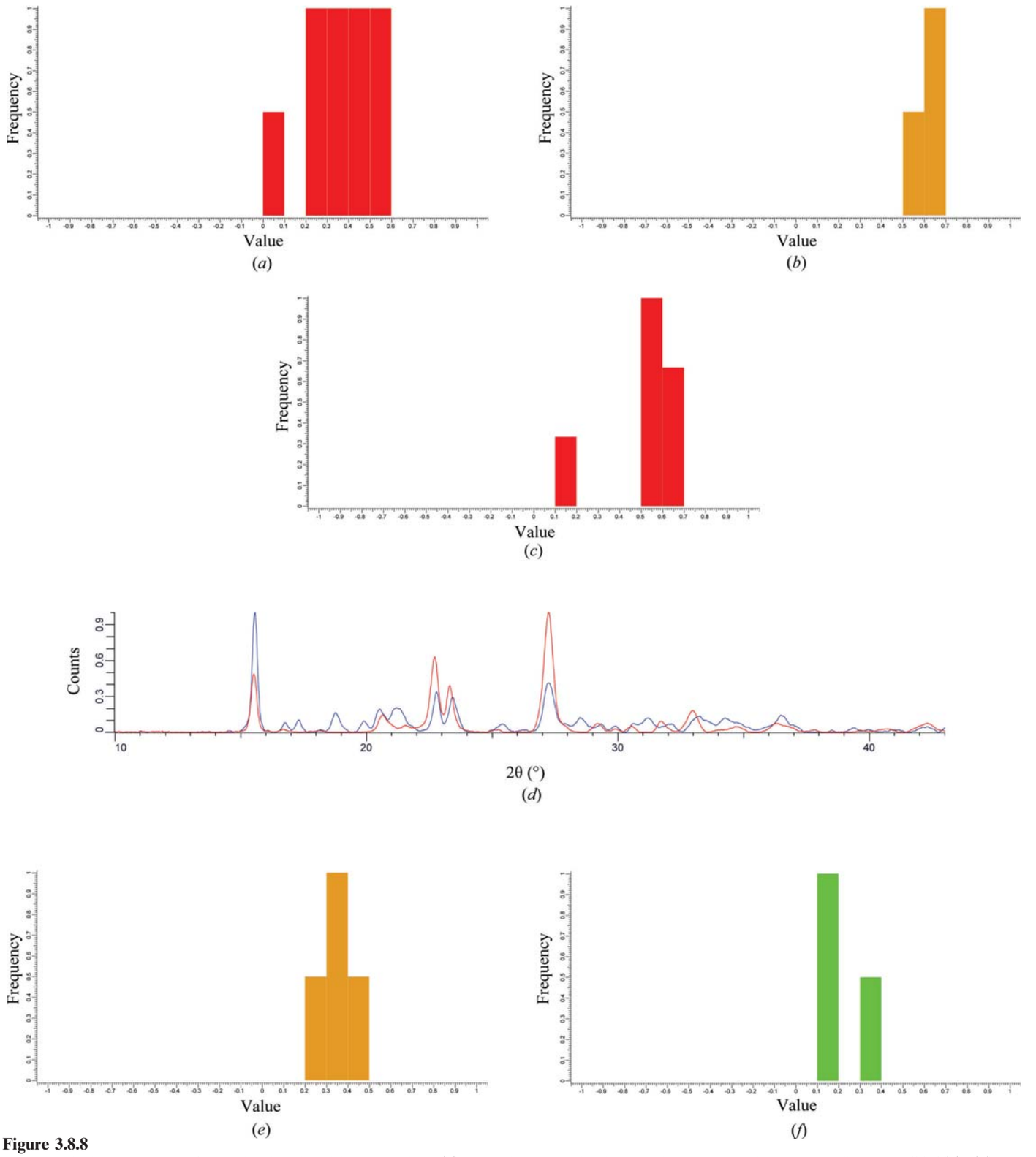


**Figure 3.8.8**
The use of silhouettes in defining the details of the clustering. (*a*) The silhouettes for the red cluster in the dendrogram from Fig. 3.8.6(*a*). (*b*) The corresponding orange cluster. Both sets of silhouettes have values that are less than 0.5, which indicates that the clustering is not well defined. (*c*) The silhouettes for the red cluster corresponding to the dendrogram in Fig. 3.8.6(*c*). The entry centred on a silhouette value of 0.15 is pattern 3. This implies that pattern 3 is only loosely connected to the cluster and this is demonstrated in part (*d*), where pattern 3 and the most representative pattern for the cluster (No. 9) are superimposed. Although there is a general sense of similarity there are significant differences and the combined correlation coefficient is only 0.62. (*e*) The silhouettes for the orange cluster corresponding to the dendrogram in Fig. 3.8.6(*c*). The silhouettes imply that this is a single cluster without outliers. (*f*) The silhouettes for the green cluster corresponding to the dendrogram in Fig. 3.8.6(*c*). The clustering is poorly defined here.

3.8.9(*a*), colour coded to reflect the values of the coefficients; the darker the shade, the higher the correlation. The resulting dendrogram and MMDS plot are shown in Figs. 3.8.9(*b*) and (*c*), respectively. Four clusters are identified in the dendrogram and these have been appropriately coloured. Other visualization tools are now shown. In Fig. 3.8.9(*d*) the pie chart is displayed; the number of rows can be adjusted to reflect the arrangement of the samples in a multiple sample holder. Fig. 3.8.9(*e*)