fusion results. The first criterion is the mutual information (MI) [35]. It is a metric defined as the sum of mutual information between each input image and the fused image. The second criterion is $Q_{AB/F}^{AB/F}$ [36] metric, proposed by Xydeas and Petovic, which considers the amount of edge information transferred from the input images to the fused image. This method uses a Sobel edge detector to calculate strength and orientation information at each pixel in both source and the fused images. For both criteria, the larger the value, the better is the fusion result.

The first experiment is performed on the ‘pepsi’ multifocus clean images which have been registered perfectly. Fig. 8 illustrates the fusion results.