











Figure 7: Tongue feature extraction

To compute the distance of two histograms chi-square  $\chi^2$  distance is used

$$\chi^2(H^1, H^2) = \sum_i \frac{(h_i^1 - h_i^2)^2}{h_i^1 + h_i^2} \quad (12)$$

where  $H^1$  and  $H^2$  are two histograms and  $h_i^1, h_i^2$  are the  $i$ th bin of the histograms.

## 4 Conclusion

In the paper, are presented some approaches for tongue recognition.

To evaluate the performance of tongue recognition methods we use own tongue database that consists 30 images. The tongue recognition is realized based on a method which combines the recognition results of steerable filters and *WLD* features to tongue recognition. The *WLD* texture features are robust against rotation and noise.

The proposed system will be evaluated on other tongue databases in future study.

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