According to the actual testing process parameters it's able to achieve a maximum tolerance time of 90~110min and etching depth of about 80μm.

## V. CONCLUSIONS

This article uses thick photoresist wet etching process in soda-lime slide glass substrate prepare pipeline for microfluidic chips, and gets the depth of 80μm, the feature size of 50μm, the sidewall steepness of less than 100°, the bottom flatness error of less than ±1.5μm, the production cycle of about 4 hour. We finished a comprehensive and systematic study, such as the square glass slide cleaning process, the photoresist thickness control, the temperature and time of various stages heat drying, exposing and developing process parameters, the dilution and composition ratio of BOE. The process is simple, fast, and low cost, it has a good prospect of mass production. It has been applied to the production of a certain microfluidic detection chips.

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