Fig. 6 shows the recovery rate of PbS increases from 72.5% to 90.9% in the range of 1-1.5 times of theory addition of Na2S, and the recovery of PbS increased with the increase of addition of Na2S. When the addition of Na2S is higher than 1.5 times theory addition of Na2S, recovery rate tends to be flat. The recovery rate of PbS increased slowly when continues to increase addition of Na2S. Therefore, select 1.5 times theory addition of Na2S as the optimal addition amount.

4. Conclusions

The research shows that waste CRT glass and Na_2S can react in melting condition in high temperature and recovery PbS precipitation. The addition of Na_2S, the addition of Na_2CO_3, reaction temperature and reaction time are the key factors to affect the recovery rate of PbS. The experiment obtains the optimal conditions that recovery of Pb from CRT glass by melting precipitation. The optimal addition of Na_2CO_3 is 24.10g, the optimal reaction temperature is 1150℃, the optimal reaction time is 120 min and the optimal addition amount is 1.5 times theory addition of Na_2S. Besides obtaining the high grade of PbS, glass slag can be further used as raw material for preparing sodium silicate, achieve resource, harmless, reduction of recycling for CRT glass. This method improves the recovery rate of Pb in waste CRT glass greatly. And the method is simple and low energy consumption, and it has very important social significance and very considerable economic value. Laying a solid foundation for large-scale industrial production and recycling of waste CRT glass in the future.

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