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Exploration of Experimental Teaching and Management of Thermal Analysis Instrument

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Thermal analysis technology has been widely used in the study of materials science, especially in the aspects of thermal decomposition process and reaction kinetics of materials. Proficiency in thermal analysis technology can improve the research ability of student majoring in materials science and engineering. Scientific experimental teaching design and standardized management of instruments can effectively improve students' proficiency in thermal analysis technology. Based on the works of thermal analysis experimental courses and related instruments management, we have sought the reforms of such aspects as follows: reinforcement theory and experiment, experimental content aggrandizing, experimental course extension, experimental instrument effective management. These reforms are expected to stimulate students' study enthusiasm, improve both learning efficiency and the ability of innovation and cooperation of students, and make the instrument better service for cultivating "Double first-class" talents.

experimental teaching thermal analysis instruments instrument management teaching reform

“ ” “ ”

[1-2]

TGA

DM

[3]

DSC

RPA

TGA

TG

DTA

DSC

DSC

STA



1

2

3

% TM

1

“ ”

145

165

(□□)

1

7

CaC₄X HO

7

7

1

1

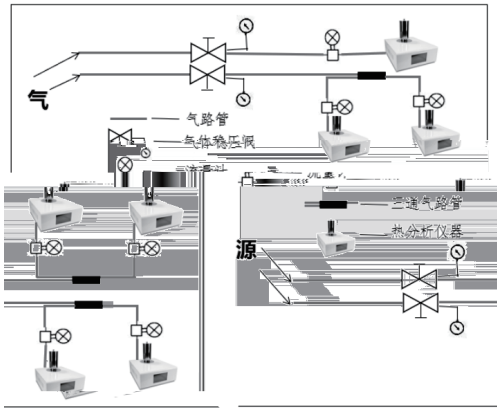
	(ng)	(nL/min)	(K/min)	
1	1	50	10	
2	5	50	10	
3	10	50	10	
4	20	50	10	
5	10	10	10	
6	10	30	10	
7	10	70	10	

“ ”

(□□)

40cm

1. 2m



2

[6]

[1] . [J]. , 2007(09): 17.

[2] . [J]. , 2012(2): 79.

[3] . [J]. , 2010, 39(07): 19-22+26.

[4] . [J]. , 2019, (16): 72-75.

[5] . “ ” [J]. , 2020, 39(06): 248-252.

[6] . STA-449F3 [J]. , 2015(05): 81-84.

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