

## 测试报告

样品信息			
样品名称	冰红茶	编号	Z20220314-012
样品重量	/	剂型	/
收样日期	2022/5/23	测试期间	2022/5/23-2022/5/24
样品描述	/		
测试需求			
测试成分	甲磺酸酚妥拉明、盐酸哌唑嗪、盐酸特拉唑嗪、 盐酸育亨宾、盐酸妥拉唑林		
参考标准			
参考标准	BJS 201808	标样	有
仪器信息			
测试仪器	高效液相色谱串联质谱仪	仪器型号	Xevo TQ-S micro

### ● 色谱条件:

色谱柱:	月旭 Ultimate® UHPLC LP-C18 (2.1×100mm,1.8μm)		
流动相:	时间	流动相 A (0.1%甲酸水溶液)	流动相 B (0.1%甲酸乙腈)
	0.0	95%	5%
	1.0	95%	5%
	7.0	10%	90%
	11.0	10%	90%
	11.5	95%	5%
	15.0	95%	5%



柱温：	40°C
流速：	0.3 mL/min
进样量：	2 $\mu$ L
注意事项：	基质曲线

● 流动相的配置：

流动相 A：取 1 mL 甲酸溶液，加水至 1000 mL，混匀，经 0.22  $\mu$ m 滤膜抽滤，即得；

流动相 B：取 1 mL 甲酸溶液，加乙腈至 1000 mL，混匀，经 0.22  $\mu$ m 滤膜抽滤，即得。

● 质谱条件：

离子源：ESI

检测方式：MRM

干燥气：氮气，500°C，流速：1000L/Hr

碰撞气：氩气

离子喷雾电压：2.0 kV



名称	母离子(m/z)	子离子(m/z)	Cone (V)	Collision (V)	Polarity
甲磺酸酚妥拉明 Phentolamine Mesylate	282.3	91	20	40	Positive
		212		20	
盐酸哌唑嗪 Prazosin Hydrochloride	384.2	95.0	8	30	Positive
		247.2		28	
		366.2		26	
盐酸特拉唑嗪 Terazosin Hydrochloride	388.2	221.2	6	30	Positive
		247.2		28	
		290.2		26	
盐酸育亨宾 Yohimbine Hydrochloride	355.2	144.1	22	30	Positive
		212.2		22	
盐酸妥拉唑林 Tolazoline Hydrochloride	161.2	65.0	14	30	Positive
		91.0		30	

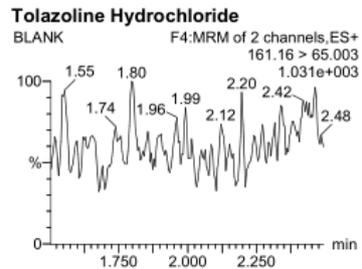
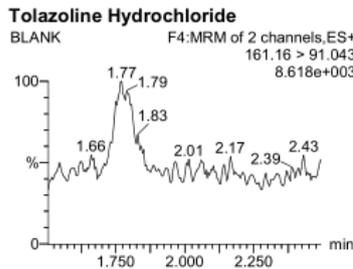
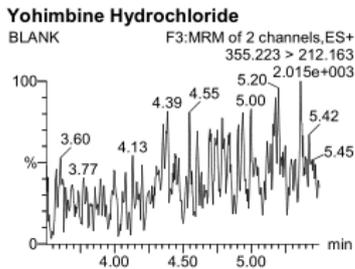
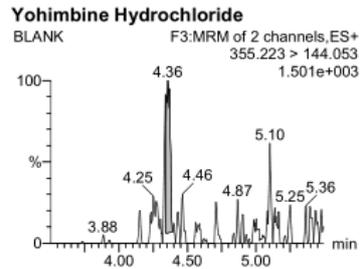
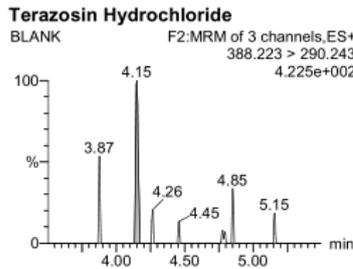
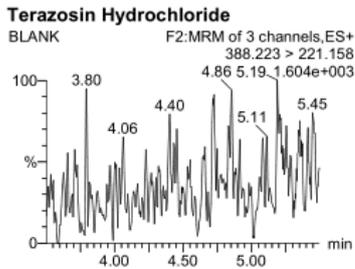
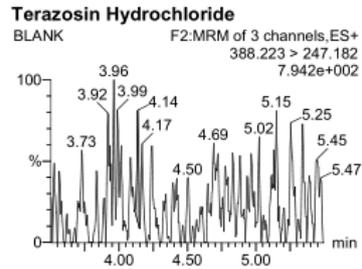
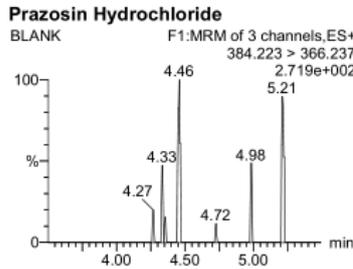
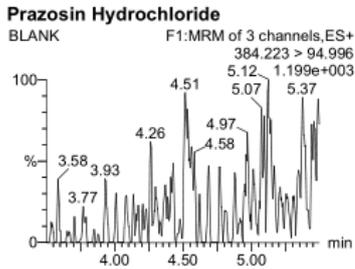
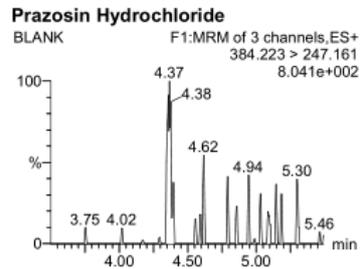
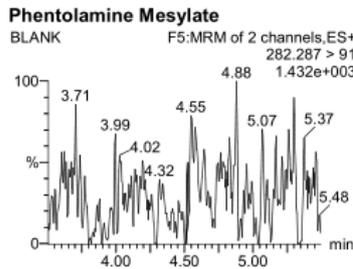
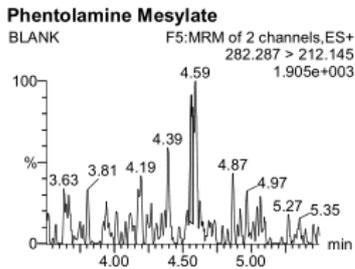
● 样品溶液的配制:

称取 1.0 g 试样, 置于 50 mL 离心管中。加入甲醇至 8 mL, 超声 10 min, 冷却至室温, 定容至 10 mL, 过膜上机。



● 谱图和数据

(1) 试剂空白。

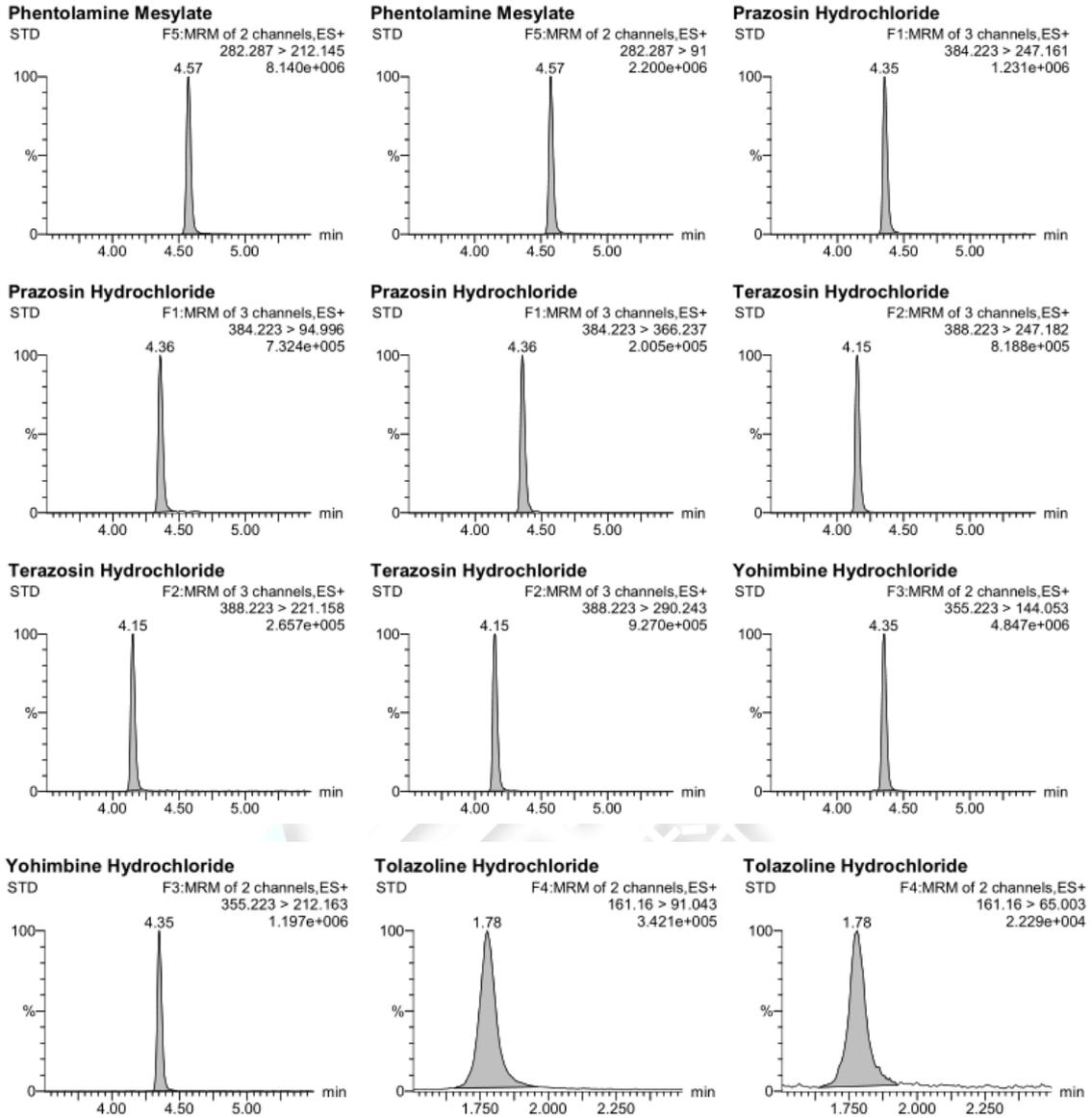


Sample Text	Name	Trace	RT	Area	Primar...	ng/mL	%Dev	S/N
BLANK	Phentolamine Mesy...	282.287 > 212.145	4.56	28.873	bd	0.00		5.9

Sample Text	Name	Trace	RT	Area	Primar...	ng/mL	%Dev	S/N
BLANK	Prazosin Hydrochlo...	384.223 > 247.161						
BLANK	Terazosin Hydrochl...	388.223 > 247.182	4.14	7.767	bb	0.01		2.1
BLANK	Yohimbine Hydrochl...	355.223 > 144.053	4.36	43.700	db	0.01		6.9
BLANK	Tolazoline Hydrochl...	161.16 > 91.043						



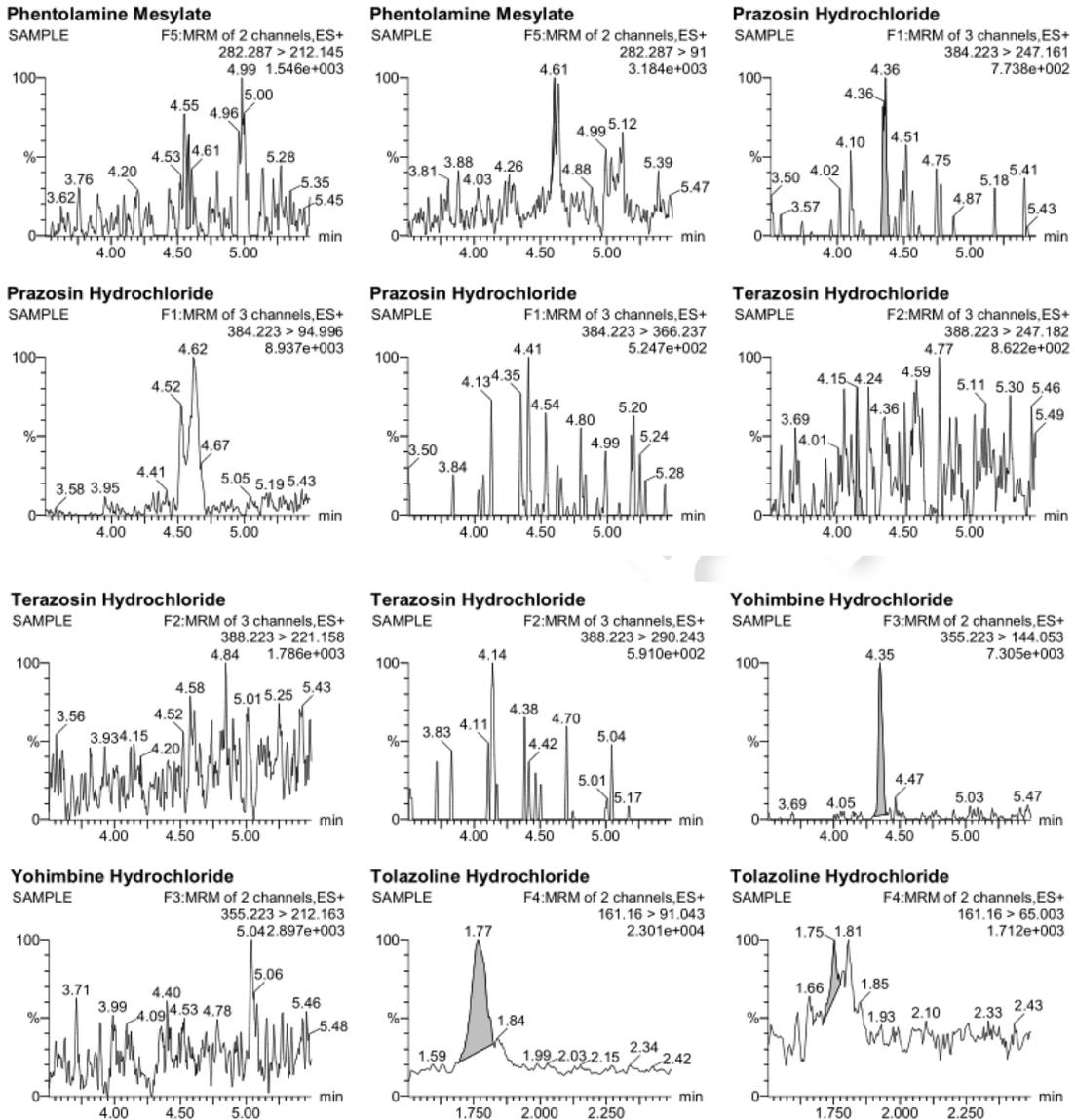
(2) 5 种  $\alpha$ -受体阻断类药物混合标准品溶液 25 ng/mL。



Sample Text	Name	Trace	RT	Area	Primar...	ng/mL	%Dev	S/N
STD	Phentolamine Mesy...	282.287 > 212.145	4.57	315576.844	bd	25.00	0.0	21329.3
STD	Prazosin Hydrochlo...	384.223 > 247.161	4.35	46372.105	bb	25.00	0.0	1675.5
STD	Terazosin Hydrochl...	388.223 > 247.182	4.15	30966.244	bb	25.00	0.0	1838.2
STD	Yohimbine Hydrochl...	355.223 > 144.053	4.35	189642.500	bb	25.00	0.0	13754.9
STD	Tolazoline Hydrochl...	161.16 > 91.043	1.78	23820.957	bb	25.00	0.0	389.8



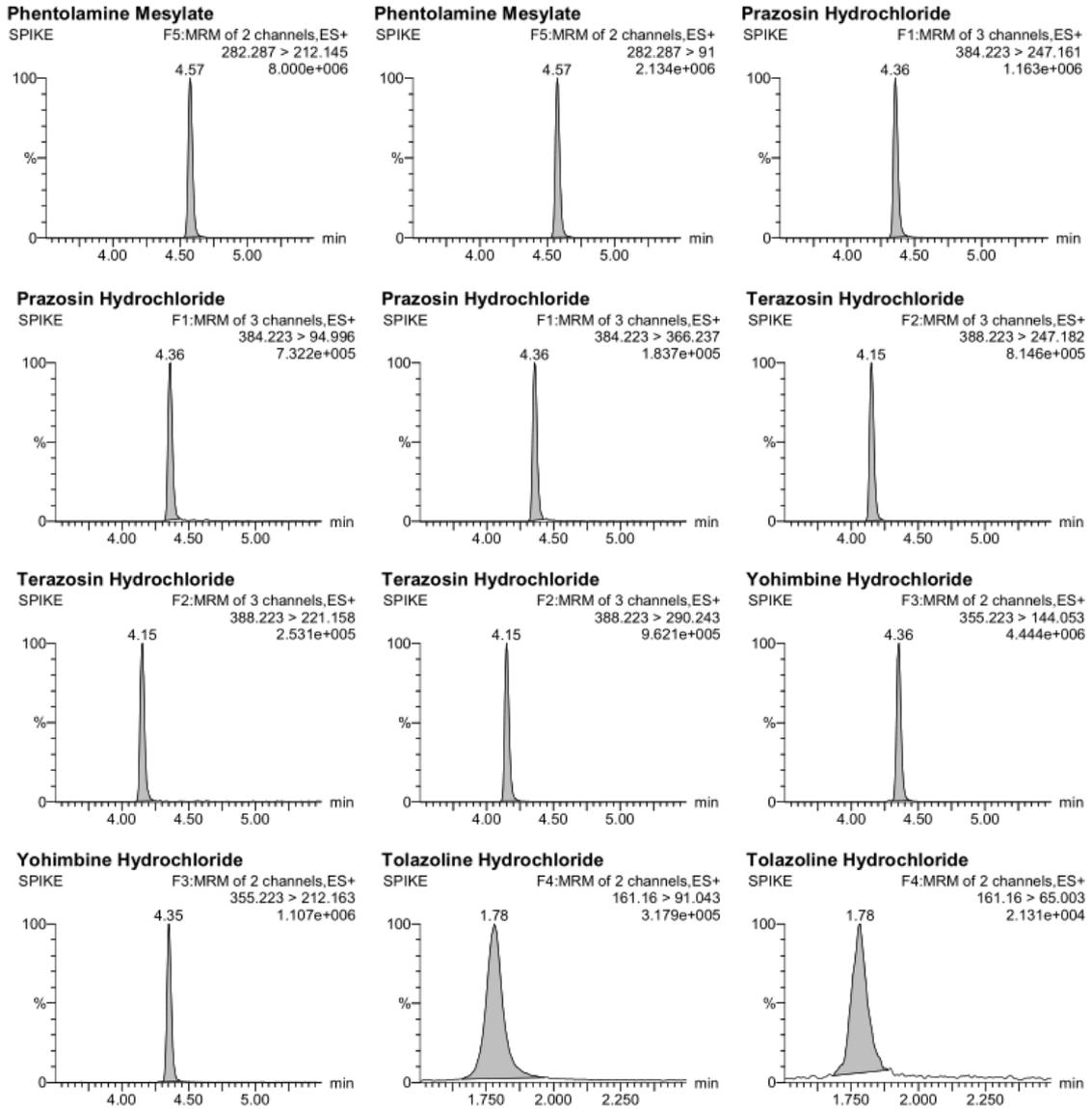
(3) 冰红茶本底。



Sample Text	Name	Trace	RT	Area	Primar...	ng/mL	%Dev	S/N
SAMPLE	Phentolamine Mesy...	282.287 > 212.145	4.58	15.459	dd	0.00		4.0
SAMPLE	Prazosin Hydrochlo...	384.223 > 247.161	4.36	22.930	bb	0.01		1.4
SAMPLE	Terazosin Hydrochl...	388.223 > 247.182	4.15	13.159	bb	0.01		3.9
SAMPLE	Yohimbine Hydrochl...	355.223 > 144.053	4.35	244.504	bb	0.03		30.0
SAMPLE	Tolazoline Hydrochl...	161.16 > 91.043	1.77	989.021	bb	1.04		28.7



(4) 加标回收: 5 种  $\alpha$ -受体阻断类药物混合标准品加标浓度 25 ng/mL



Sample Text	Name	Trace	RT	Area	Primar...	ng/mL	%Dev	S/N
SPIKE	Phentolamine Mesy...	282.287 > 212.145	4.57	293477.781	bb	23.25		7862.7
SPIKE	Prazosin Hydrochlo...	384.223 > 247.161	4.36	43933.398	bb	23.69		2939.5
SPIKE	Terazosin Hydrochl...	388.223 > 247.182	4.15	30146.479	bb	24.34		1778.2
SPIKE	Yohimbine Hydrochl...	355.223 > 144.053	4.36	168852.594	bb	22.26		5733.1
SPIKE	Tolazoline Hydrochl...	161.16 > 91.043	1.78	22446.637	bb	23.56		501.7



● 结论:

化合物	实际浓度 ng/mL	理论浓度 ng/mL	回收率, %
酚妥拉明	23.25	25.0	93.0
哌唑嗪	23.69		94.8
特拉唑嗪	24.34		97.4
育亨宾	22.26		89.0
妥拉唑林	23.56		94.2

使用 Ultimate® UHPLC LP-C18 (2.1×100mm,1.8μm)色谱柱检测冰红茶中 5 种 α -受体阻断类药物, 峰形和回收率良好。

日期: 2022/05/24

