

<https://physics.nist.gov/PhysRefData/Handbook/Tables/mercurytable2.htm>

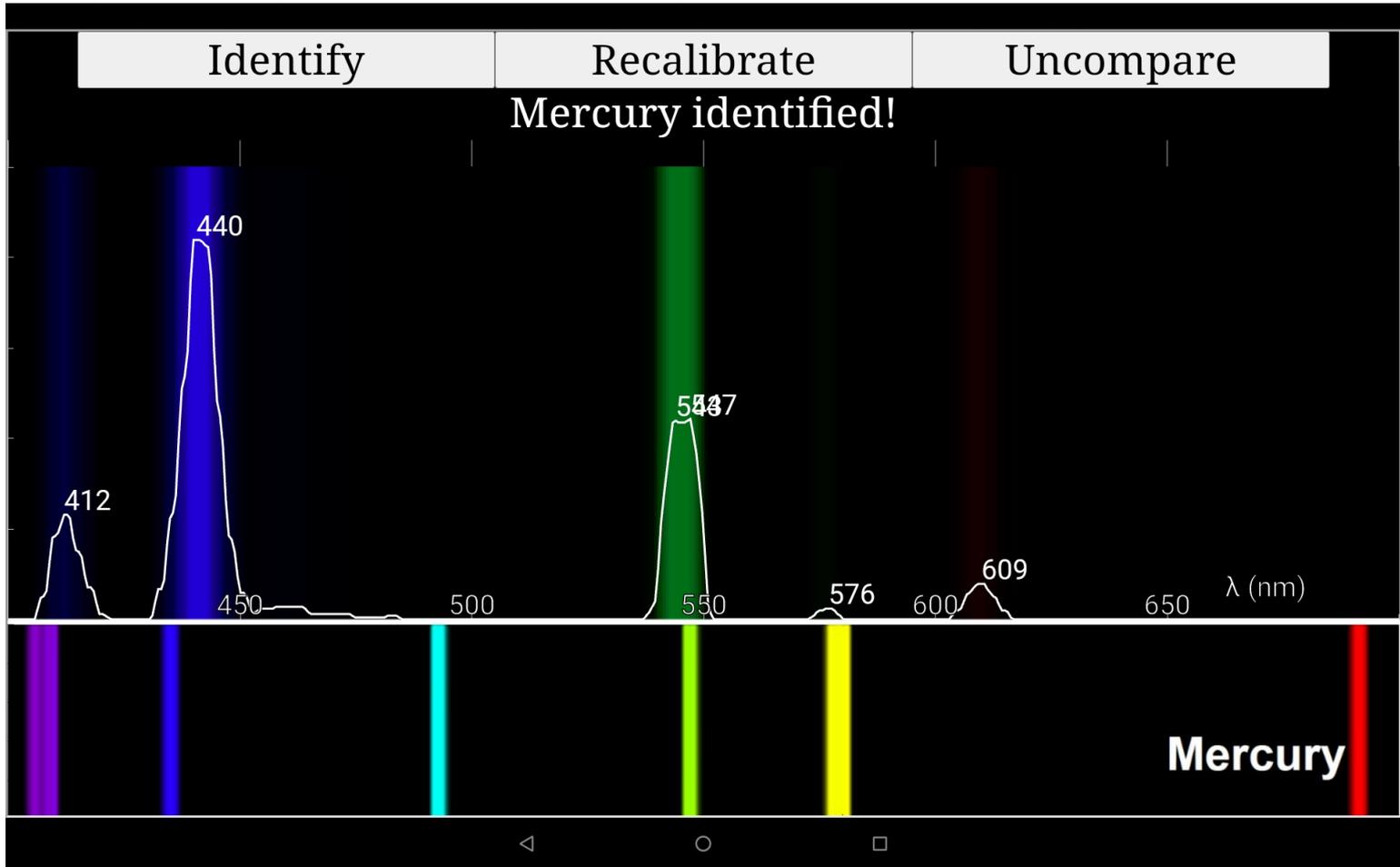
400 P	4046.563	Hg I
1000 P	4358.328	Hg I
500 P	5460.735	Hg I
50	5769.598	Hg I
60	5790.663	Hg I

Persistent Lines of Neutral Mercury (Hg I)

Intensity	Wavelength (Å)	A_{ki} ($10^6 s^{-1}$)	Energy Levels (cm^{-1})	Configurations	Terms	J	Line Ref.	A_{ki} Ref.
1000	1849.499	7.46	0.000 54068.781	$5d^{10}(^1S)6s^2$ $5d^{10}(^1S)6s6p$	$1S$ $1P^o$	0 1	WAL63	M00
1000	2536.517	0.080	0.000 39412.300	$5d^{10}(^1S)6s^2$ $5d^{10}(^1S)6s6p$	$1S$ $3P^o$	0 1	BAL50	FW96
250	2967.280	0.45	37645.080 71336.164	$5d^{10}(^1S)6s6p$ $5d^{10}(^1S)6s6d$	$3P^o$ $(^1/2, ^3/2)$	0 1	BAL50	FW96
600	3650.153	1.3	44042.977 71431.311	$5d^{10}(^1S)6s6p$ $5d^{10}(^1S)6s6d$	$3P^o$ $(^1/2, ^5/2)$	2 3	BAL50	FW96
400	4046.563	0.21	37645.080 62350.456	$5d^{10}(^1S)6s6p$ $5d^{10}(^1S)6s7s$	$3P^o$ $3S$	0 1	BAL50	FW96
1000	4358.328	0.557	39412.300 62350.456	$5d^{10}(^1S)6s6p$ $5d^{10}(^1S)6s7s$	$3P^o$ $3S$	1 1	BAL50	FW96
500	5460.735	0.487	44042.977 62350.456	$5d^{10}(^1S)6s6p$ $5d^{10}(^1S)6s7s$	$3P^o$ $3S$	2 1	BAL50	FW96
200	10139.76	0.271	54068.781 63928.243	$5d^{10}(^1S)6s6p$ $5d^{10}(^1S)6s7s$	$1P^o$ $1S$	1 0	BAL50	FW96

Oriane SUFFYS 107 2021/2022

Spectre obtenu après étalonnage sur lampe fluocompacte (réflexion sur paillasse blanche élève) puis **sans bouger le spectro par rapport à l'objectif**, spectre obtenu pour Hg (réflexion sur écran métallique blanc)
Surprise avec une raie à 578 nm jamais observée auparavant et une raie à 407 nm rarement visible sur le profil spectral.



Bizarre, la raie du Hg à 578 nm est prévue sur l'appli light analyser,
 Comme une raie cyan non référencée, la rouge est très peu intense (voir ci-dessous)

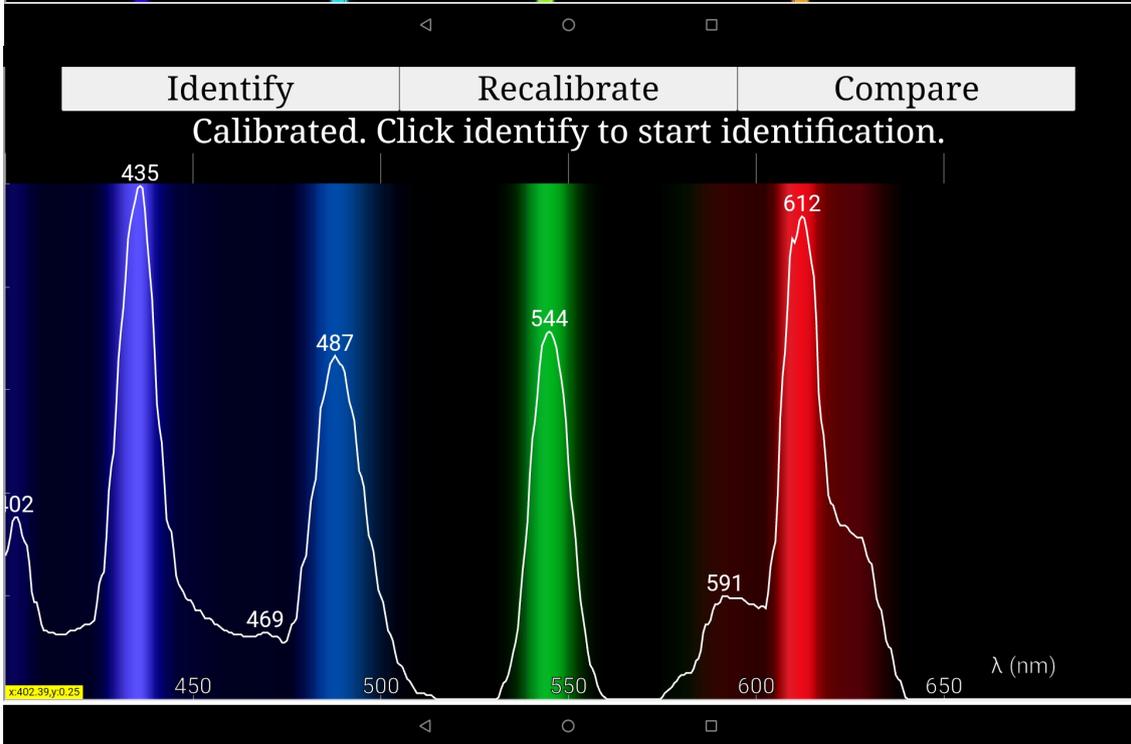
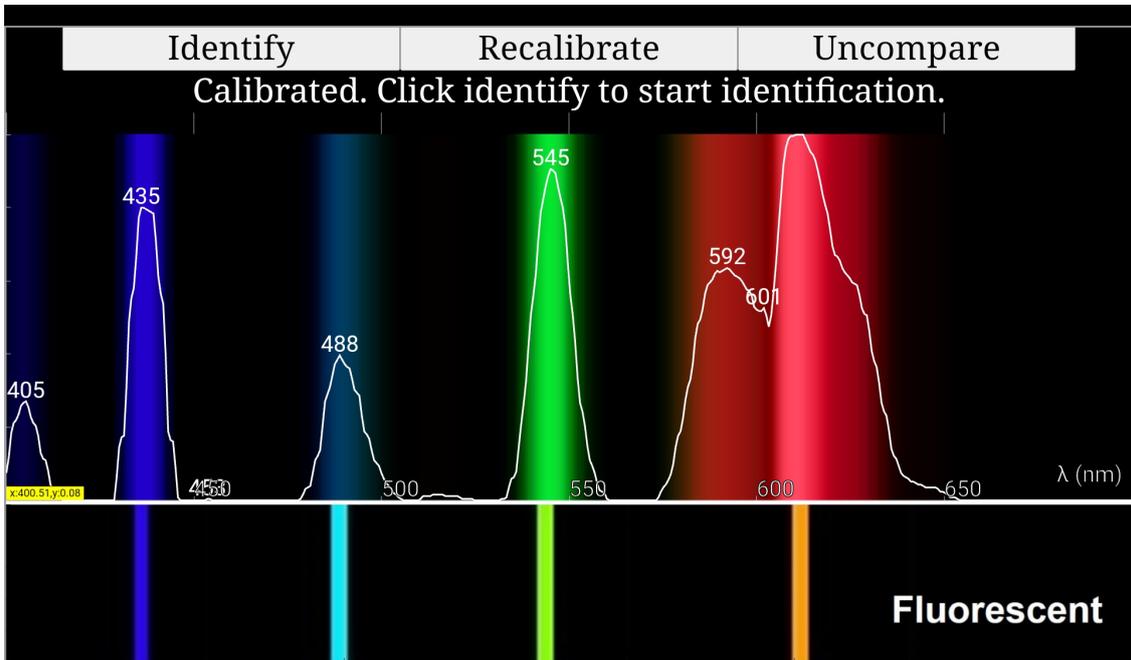
25	7081.90	Hg I
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Persistent Lines of Neutral Mercury (Hg I)

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1000	2536.517	0.080	0.000 39412.300	$5d^{10}(1s)6s^2$ $5d^{10}(1s)6s6p$	$1s$ $3p^*$	0 1	BAL50	FW96
250	2967.280	0.45	37645.080 71336.164	$5d^{10}(1s)6s6p$ $5d^{10}(1s)6s6d$	$3p^*$ $(^1/2, ^3/2)$	0 1	BAL50	FW96
600	3650.153	1.3	44042.977 71431.311	$5d^{10}(1s)6s6p$ $5d^{10}(1s)6s6d$	$3p^*$ $(^1/2, ^5/2)$	2 3	BAL50	FW96
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200	10139.76	0.271	54068.781 63928.243	$5d^{10}(1s)6s6p$ $5d^{10}(1s)6s7s$	$1p^*$ $1s$	1 0	BAL50	FW96



Comparaison raies Hg et lampe fluocompacte (lycée luynes)

400 P	4046.563	Hg I
1000 P	4358.328	Hg I
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Persistent Lines of Neutral Mercury (Hg I)

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1000	1849.499	7.46	0.000	$5d^{10}(^1S)6s^2$	1S	0	WA63	M00
			54068.781	$5d^{10}(^1S)6s6p$	$^1P^o$	1		
1000	2536.517	0.080	0.000	$5d^{10}(^1S)6s^2$	1S	0	BAL50	FW96
			39412.300	$5d^{10}(^1S)6s6p$	$^3P^o$	1		
250	2967.280	0.45	37645.080	$5d^{10}(^1S)6s6p$	$^3P^o$	0	BAL50	FW96
			71336.164	$5d^{10}(^1S)6s6d$	$(^1/2, ^3/2)$	1		
600	3650.153	1.3	44042.977	$5d^{10}(^1S)6s6p$	$^3P^o$	2	BAL50	FW96
			71431.311	$5d^{10}(^1S)6s6d$	$(^1/2, ^5/2)$	3		
400	4046.563	0.21	37645.080	$5d^{10}(^1S)6s6p$	$^3P^o$	0	BAL50	FW96
			62350.456	$5d^{10}(^1S)6s7s$	3S	1		
1000	4358.328	0.557	39412.300	$5d^{10}(^1S)6s6p$	$^3P^o$	1	BAL50	FW96
			62350.456	$5d^{10}(^1S)6s7s$	3S	1		
500	5460.735	0.487	44042.977	$5d^{10}(^1S)6s6p$	$^3P^o$	2	BAL50	FW96
			62350.456	$5d^{10}(^1S)6s7s$	3S	1		
200	10139.76	0.271	54068.781	$5d^{10}(^1S)6s6p$	$^1P^o$	1	BAL50	FW96
			63928.243	$5d^{10}(^1S)6s7s$	1S	0		

Identify

Recalibrate

Compare

No gas identified!



<https://physics.nist.gov/PhysRefData/Handbook/Tables/sodiumtable2.htm>

Persistent Lines of Neutral Sodium (Na I)

1000 P	5889.950	Na I
500 P	5895.924	Na I

Coup de chance : on voit ici la double raie perçue par le spectro

raie **non référencée** par l'appli ...

Intensity	Wavelength (Å)	A_{ki} ($10^8 s^{-1}$)	Energy Levels (cm^{-1})	Configurations	Terms	J	Line Ref.	A_{ki} Ref.
5	2852.81	0.00554	0.000	3s	$2s$	1/2	R56	M03
			35042.85	5p	$2p^*$	3/2		
2	2853.01	0.00554	0.000	3s	$2s$	1/2	R56	M03
			35040.38	5p	$2p^*$	1/2		
15	3302.37	0.0281	0.000	3s	$2s$	1/2	R56	M03
			30272.58	4p	$2p^*$	3/2		
8	3302.98	0.0281	0.000	3s	$2s$	1/2	R56	M03
			30266.99	4p	$2p^*$	1/2		
1000	5889.950	0.616	0.000	3s	$2s$	1/2	R56	M03
			16973.368	3p	$2p^*$	3/2		
500	5895.924	0.614	0.000	3s	$2s$	1/2	R56	M03
			16956.172	3p	$2p^*$	1/2		
60	8183.256	0.453	16956.172	3p	$2p^*$	1/2	R56	FW96
			29172.889	3d	$2D$	3/2		
10	8194.790	0.090	16973.368	3p	$2p^*$	3/2	R56	FW96
			29172.889	3d	$2D$	3/2		
110	8194.824	0.54	16973.368	3p	$2p^*$	3/2	R56	FW96
			29172.839	3d	$2D$	5/2		
5	11381.45	0.090	16956.172	3p	$2p^*$	1/2	R56	FW96
			25739.991	4s	$2s$	1/2		
12	11403.78	0.176	16973.368	3p	$2p^*$	3/2	R56	FW96
			25739.991	4s	$2s$	1/2		
5	18465.25	0.140	29172.839	3d	$2D$	5/2	R56	WSM69
			34586.92	4f	$2p^*$	7/2		
			29172.839	3d	$2D$	5/2		
			34586.92	4f	$2p^*$	5/2		