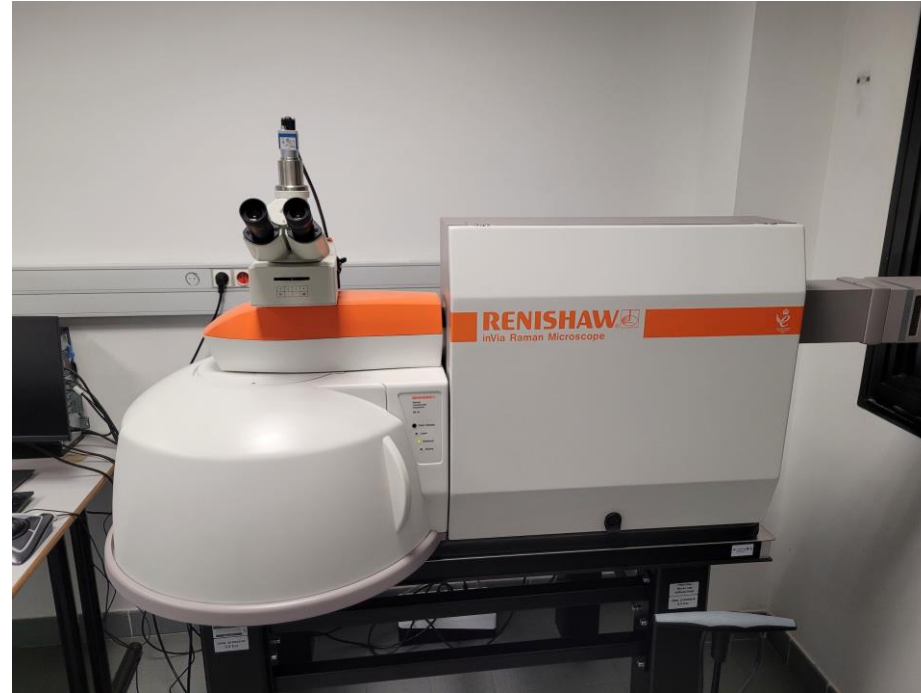
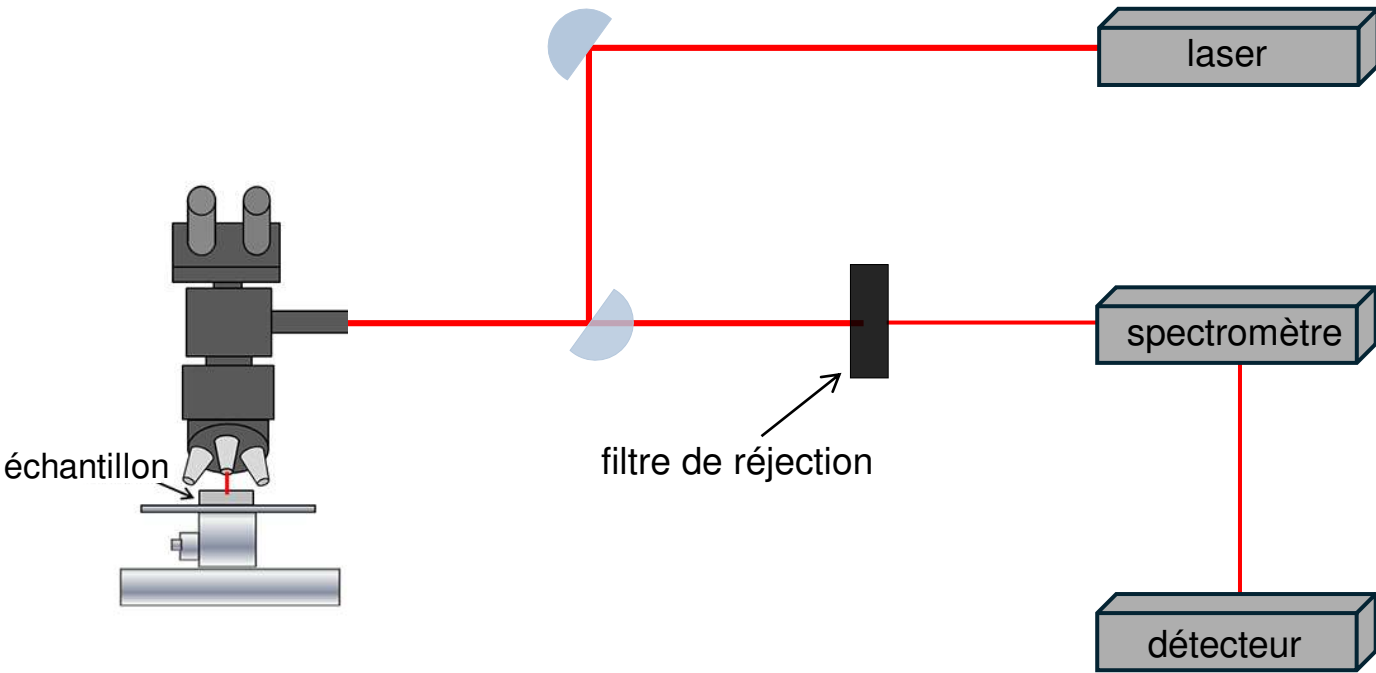


PROJET PERSONNEL DE RECHERCHE

Les microplastiques en milieu marin

Qu'est-ce que la spectroscopie Raman ?





Allure d'un spectre :

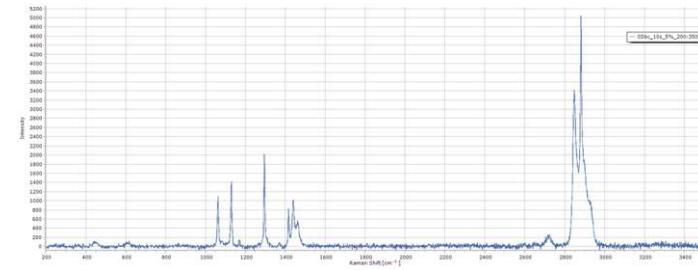
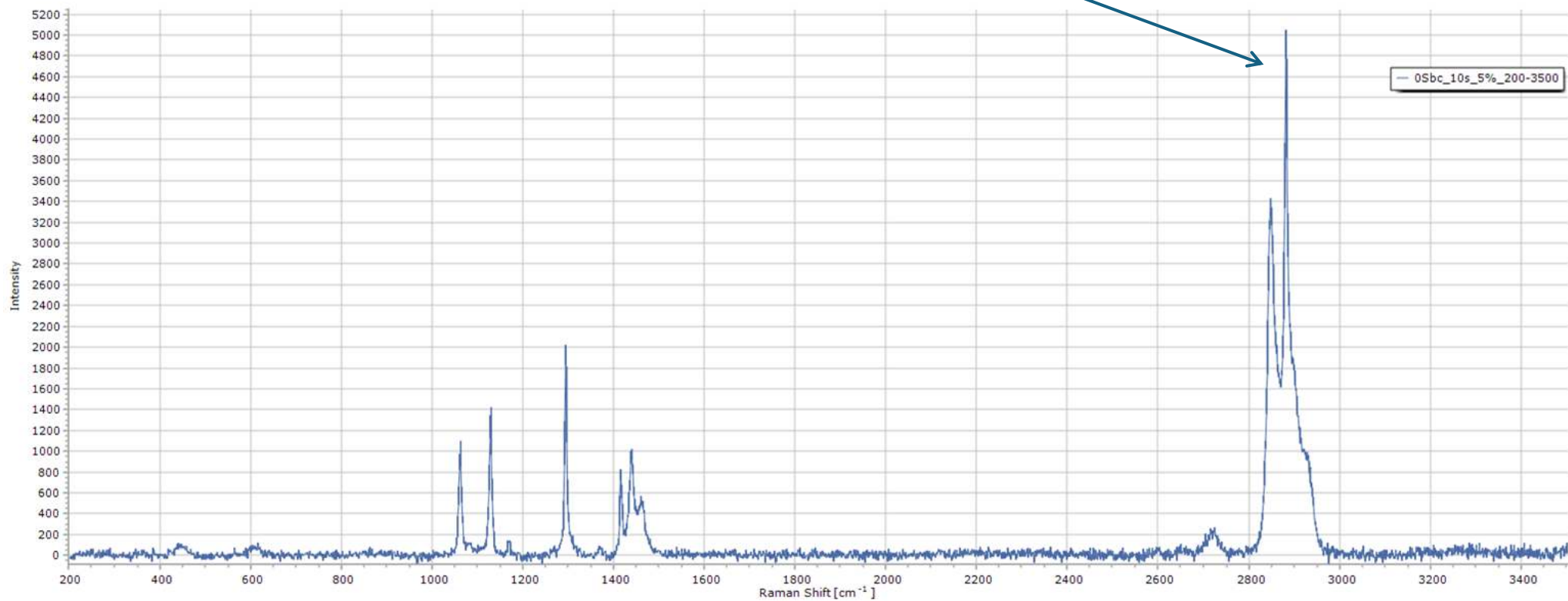
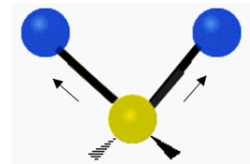


Schéma simplifié du fonctionnement d'un spectroscope Raman

Exemple de vibration pour un groupe CH_2 :



Analyses grâce à la spectroscopie Raman

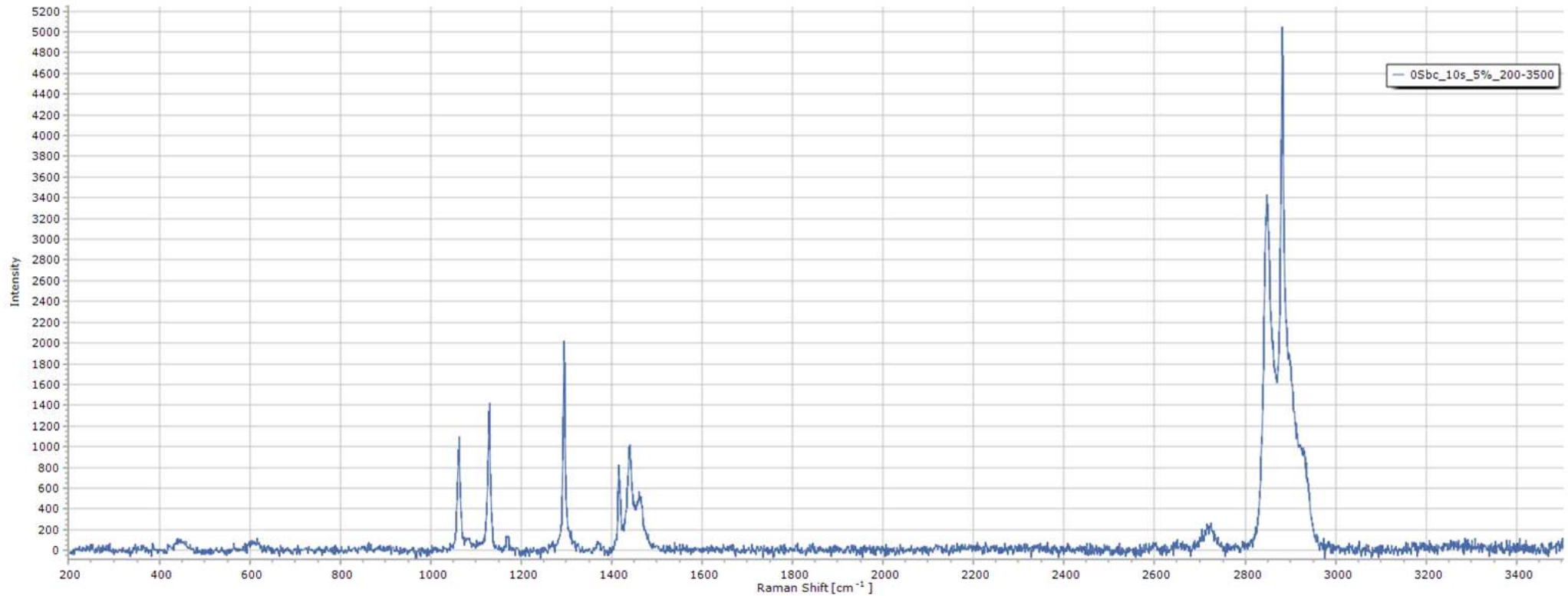


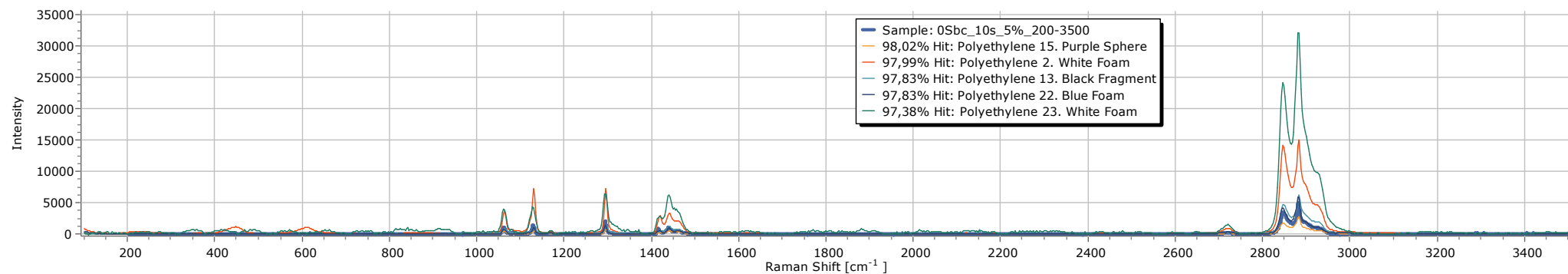
Bouchons de bouteilles en plastique



- quel polymère ?
- quel(s) additif(s) ?

Spectre du bouchon blanc

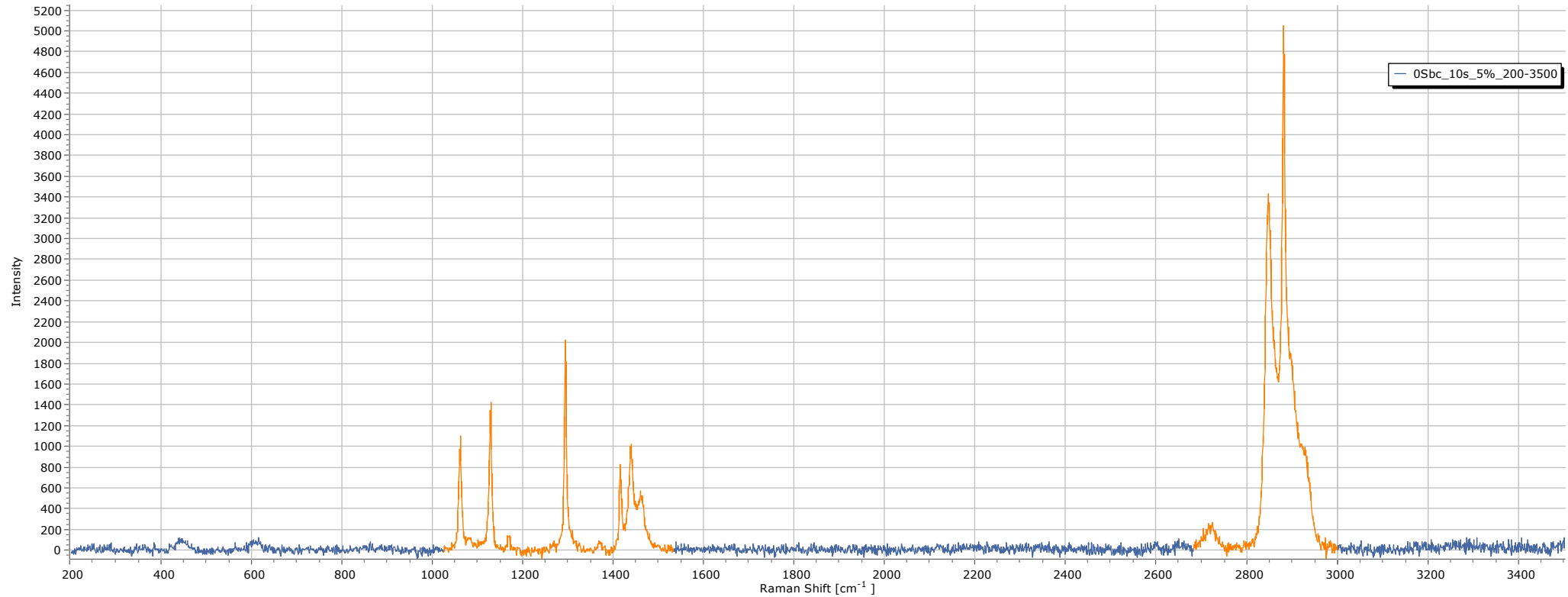




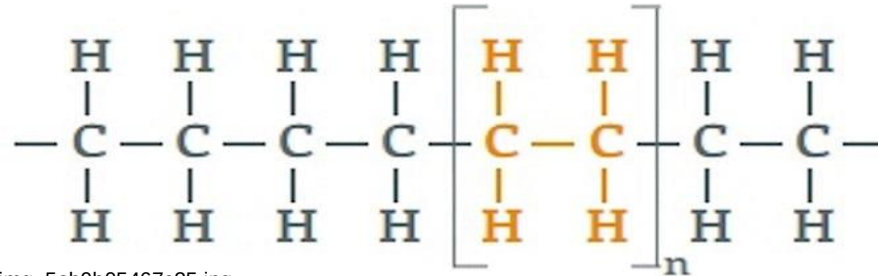
Résultats obtenus grâce à *SpectraGryph*

Entry of sample files. Search results.												
group	search	show	spectrum info				search & results		descriptor rating			
	☐	☒	sample ID	ref. ID	name	method	search name	rating	<u>Polymer</u>	Laser wl	colour	weathered
	☒	☒	0Sbc_10s	--	0Sbc_10s_5%_200	Raman	Search1	98,0				
				Polyethylene	Polyethylene 15.			98,02	Polyethylene	532	Purple	Yes
				Polyethylene 2	Polyethylene 2.			97,99	Polyethylene	532	White	Yes
				Polyethylene	Polyethylene 13.			97,83	Polyethylene	532	Black	Yes
				Polyethylene	Polyethylene 22.			97,83	Polyethylene	532	Blue	Yes
				Polyethylene	Polyethylene 23.			97,38	Polyethylene	532	White	Yes

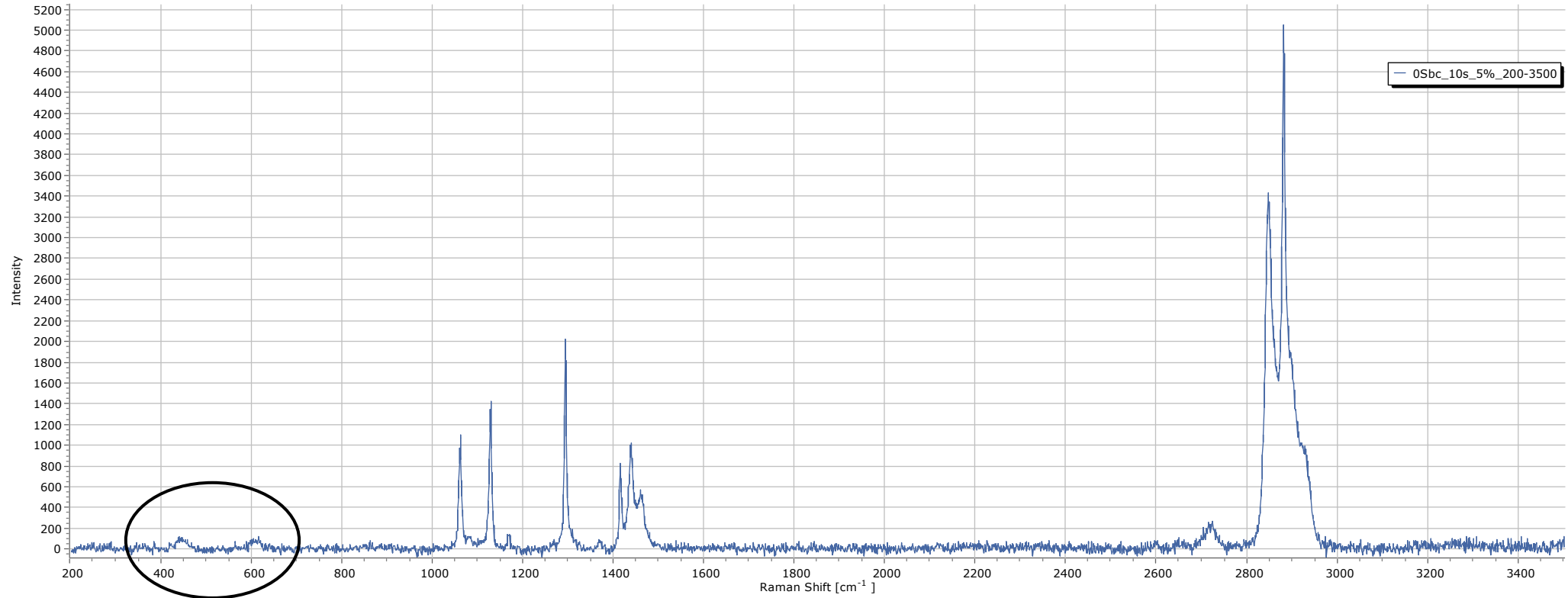
Spectre du bouchon blanc



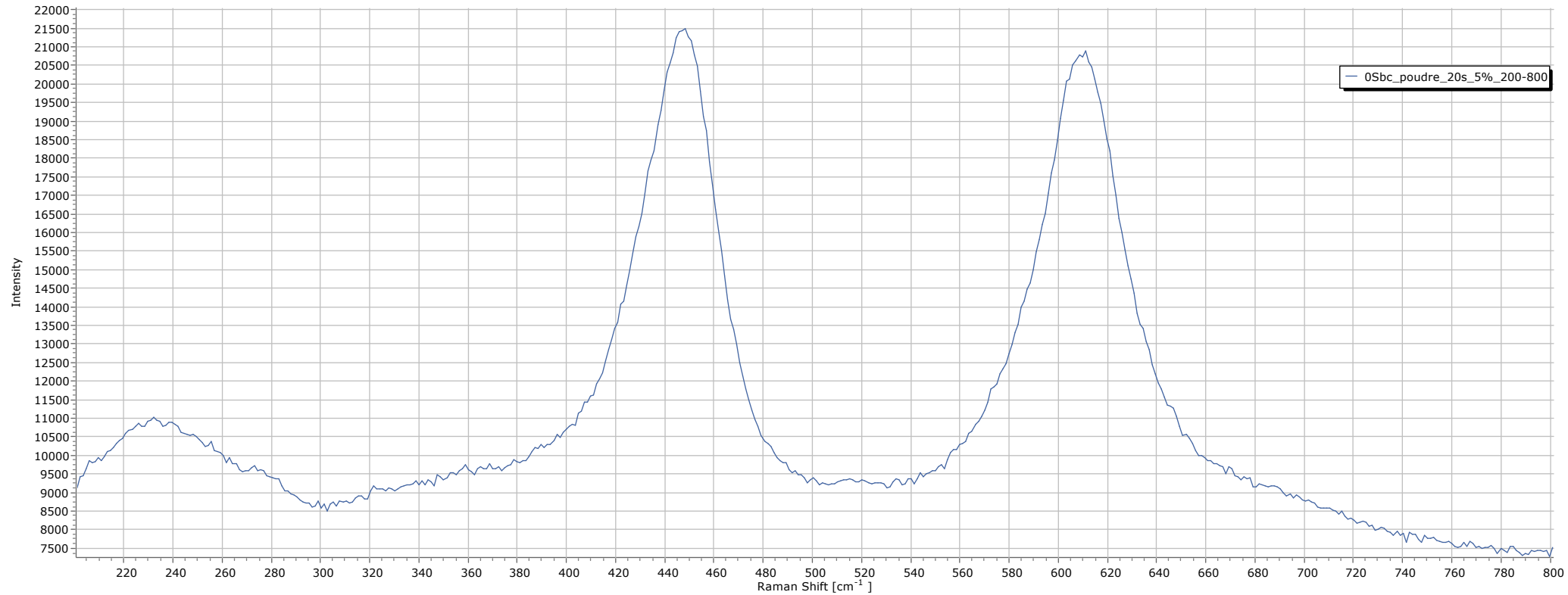
Formule du polyéthylène :

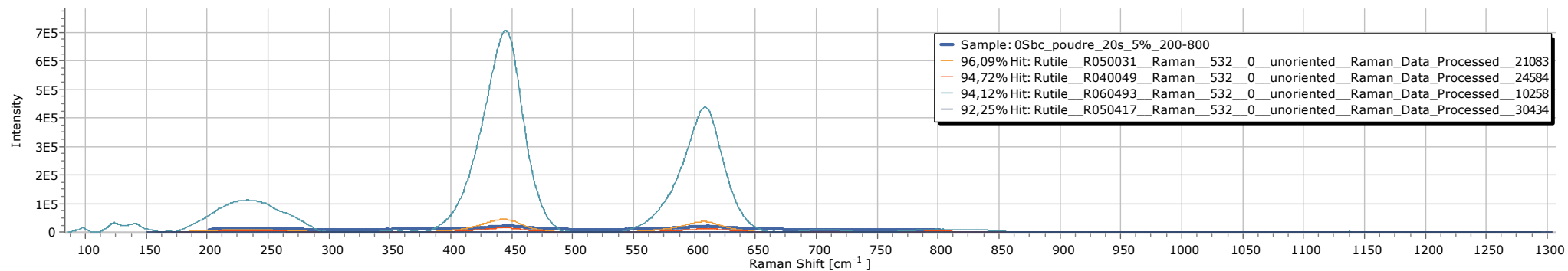


Spectre du bouchon blanc



Spectre du bouchon blanc pyrolysé



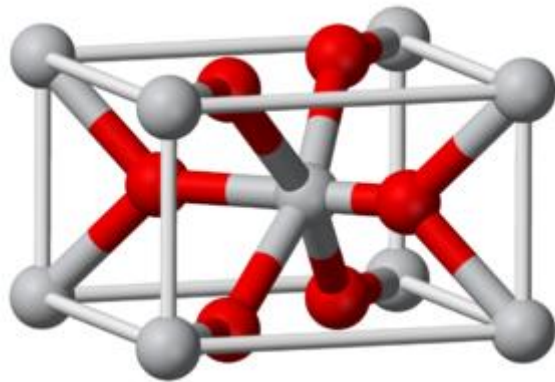


R sultats obtenus gr ce   SpectraGryph

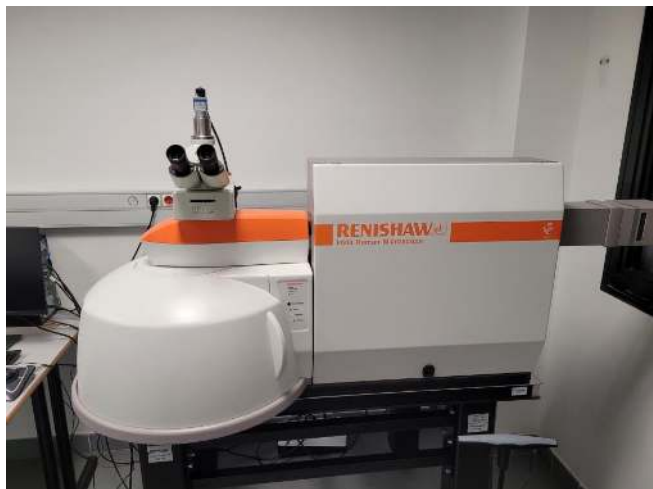
Entry of sample files. Search results.

group	search	show	spectrum info			search & results	
	☐	☒	sample ID	ref. ID	name	method	search name
	☒	☒	0Sbc_pou	--	0Sbc_poudre_20s_	Raman	Search1
				Rutile	Rutile__R050031__		96,1
				Rutile	Rutile__R040049__		96,09
				Rutile	Rutile__R060493__		94,72
				Rutile	Rutile__R050417__		94,12
							92,25

Maille cristalline du rutile :



Conclusion



- quel polymère ? Le polyéthylène
- quel(s) additif(s) ? Le dioxyde de titane