

CHEM 314 Projects

Spring 2013

Project 1: La Vie de la Vosgienne Les Citrons	
Metals	Identify and quantify major element in metal tin by two methods Quantify trace elements in metal cap Quantify major and trace metals in the candies
FT-IR	Identify plastic used in the wrapping
Electron microscopy	Examine metals in paint on cap OR pose your own question
HPLC	Quantify the sweeteners in the candies Quantify citric acid in the product
GC-MS	Confirm the presence of turmeric
CYOA I and II	Pose and answer two of your own questions

Project 2: Sharp Cheddar Easy Cheese	
Metals	Identify and quantify major element in container by two methods Quantify trace elements in the container Quantify calcium in easy cheese
FT-IR	Identify plastic in the cap
Electron microscopy	Examine metals in paint on container OR pose your own question Determine the thickness of the metal used in the container
HPLC	Confirm the identity of two ingredients in the easy cheese
GC-MS	Identify several volatiles in easy cheese
CYOA I and II	Pose and answer two of your own questions

Project 3: Citrus and Savory Seasoning Rub	
Metals	Identify and quantify major element in container by two methods Quantify trace elements in the container
FT-IR	Identify plastic in the cap
Electron microscopy	Identify individual grains in the spice mixture Determine the thickness of the metal used in the container
HPLC	Quantify the sweetener in the spice mix Quantify the maltodextrin
GC-MS	Confirm the presence of paprika, chili pepper, lemon and orange peel
CYOA I and II	Pose and answer two of your own questions

Project 4: L'oreal Paris Eye Liner	
Metals	Identify and quantify major element in the sharpener by two methods Quantify trace elements in the pencil sharpener Determine the metals present in the eyeliner
FT-IR	Identify plastic in the pencil cap, pencil sharpener, and container
Electron microscopy	Examine a smear of pencil Examine metals in pencil body
HPLC	Pose your own question OR Join another group
GC-MS	Examine the volatiles in the eyeliner
CYOA I and II	Pose and answer two of your own questions OR Examine the mineral phases present in eyeliner

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Project 5: Milani EasyBrow	
Metals	Identify and quantify major element in the brush coil by two methods Identify and quantify the major elements in the brush holdie thing Quantify trace elements in the brush coil Determine the metals present in the eyeliner
FT-IR	Identify plastic in the pencil cap, brush cap, and container
Electron microscopy	Examine a smear of pencil Examine metals in brush holdie thing
HPLC	Pose your own question OR Join another group
GC-MS	Examine the volatiles in the pencil
CYOA I and II	Pose and answer two of your own questions OR Examine the mineral phases present in eyebrow pencil

Project 6: ALtoids Liquorice	
Metals	Identify and quantify major element in metal tin by two methods Quantify trace elements in metal cap Quantify major and trace metals in the candies
FT-IR	Identify plastic used in the wrapping
Electron microscopy	Examine metals in paint on cap OR pose your own question Determine the thickness of the metal in the tin
HPLC	Quantify the sweeteners in the candies gelatin
GC-MS	Identify and quantify two "natural flavors" in the product
CYOA I and II	Pose and answer two of your own questions