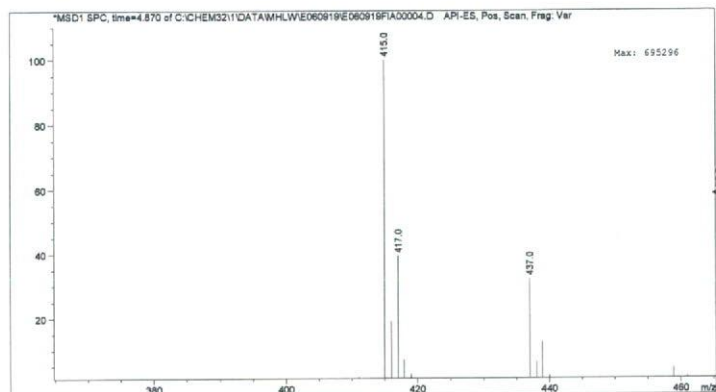


マススペクトル



検量線

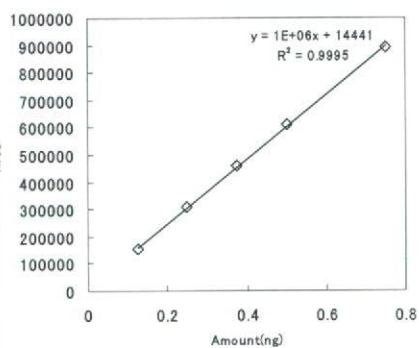
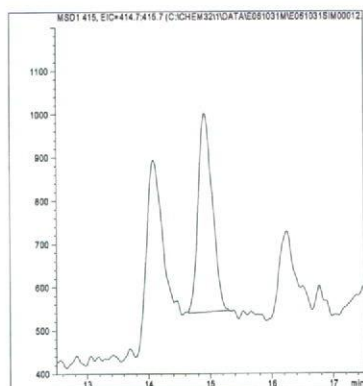
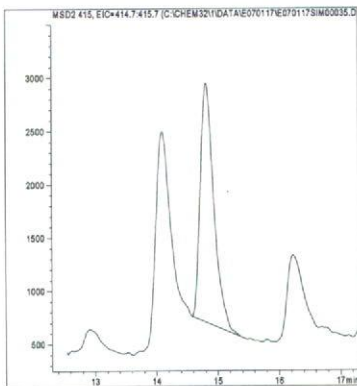


図 1. マススペクトルおよび検量線 (クロリムロンエチル)

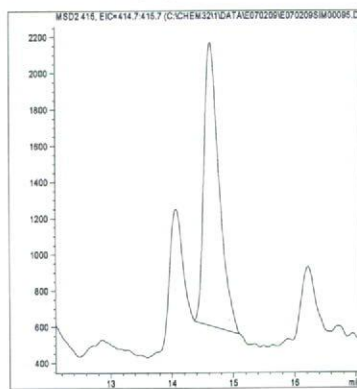
最小検出量評価 (0.001ng)



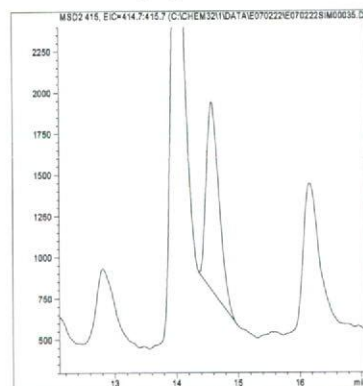
標準品 (0.05ng)



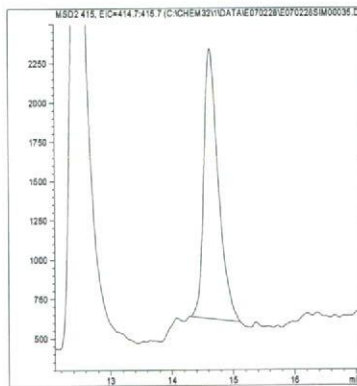
筋肉 (0.01mg/kg 添加)



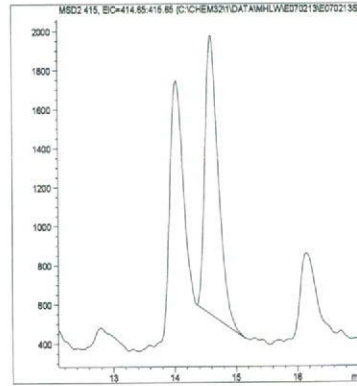
脂肪 (0.01mg/kg 添加)



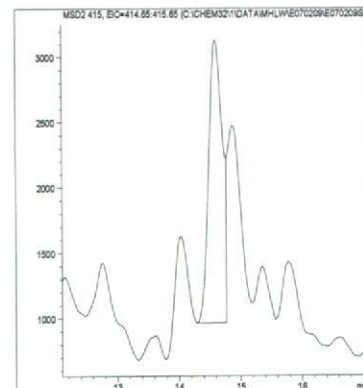
肝臓 (0.01mg/kg 添加)



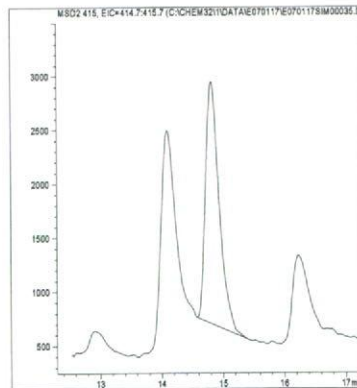
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

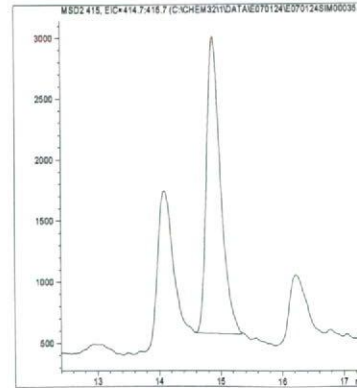
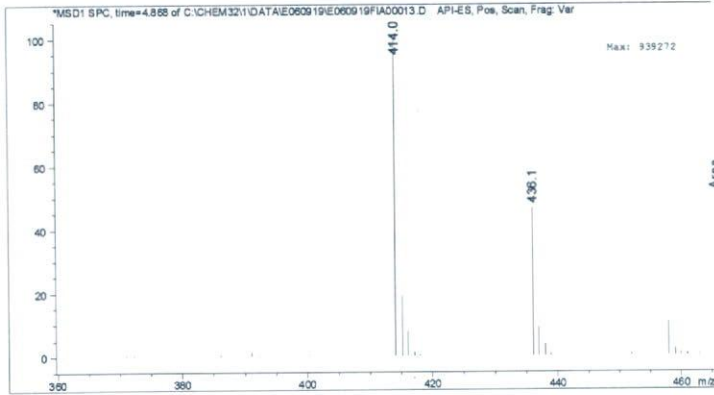


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (クロリムロンエチル)

マススペクトル



検量線

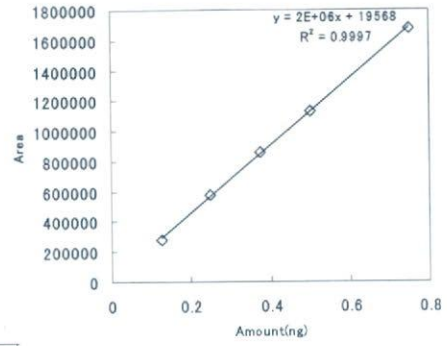
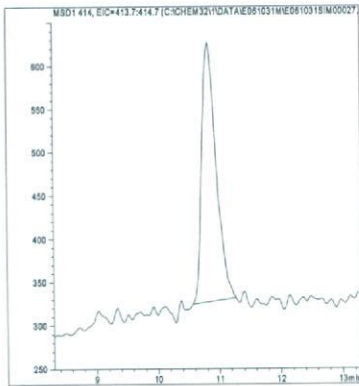
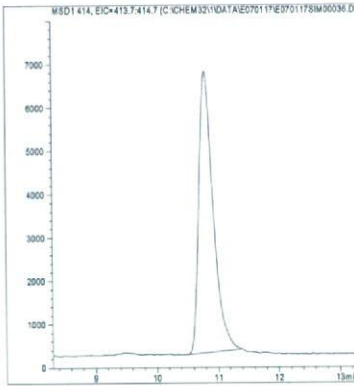


図1. マススペクトルおよび検量線 (シノスルフロン)

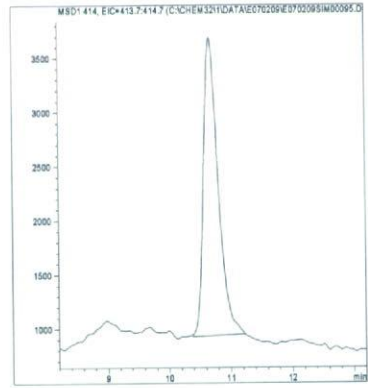
最小検出量評価 (0.0005ng)



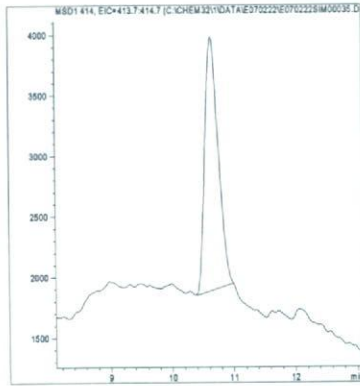
標準品 (0.05ng)



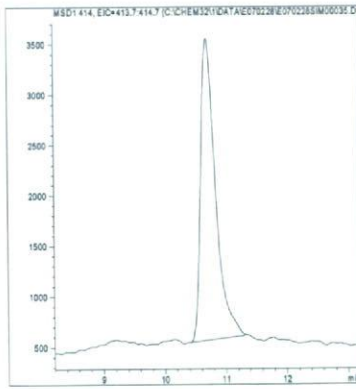
筋肉 (0.01mg/kg 添加)



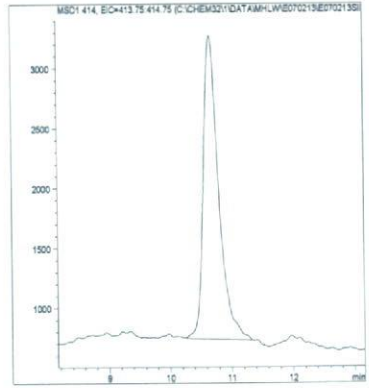
脂肪 (0.01mg/kg 添加)



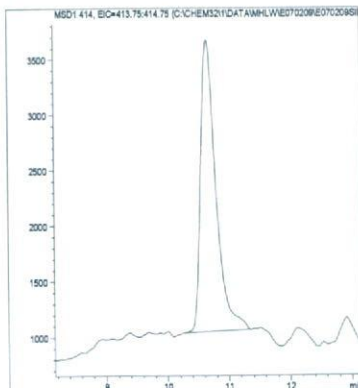
肝臓 (0.01mg/kg 添加)



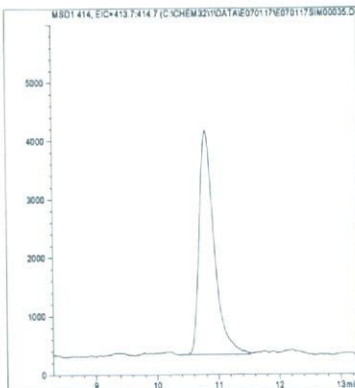
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

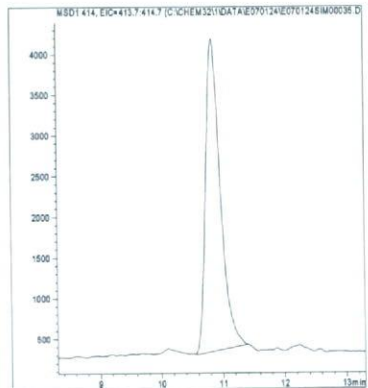
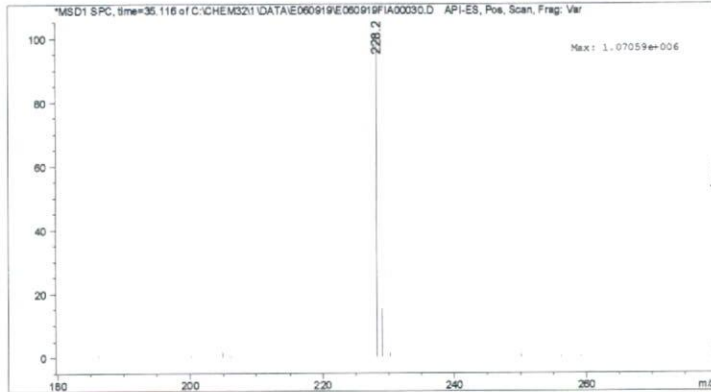


図2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (シノスルフロン)

マススペクトル



検量線

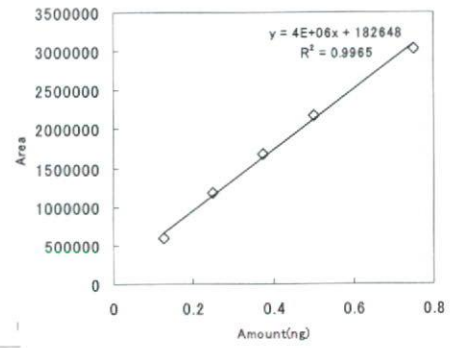
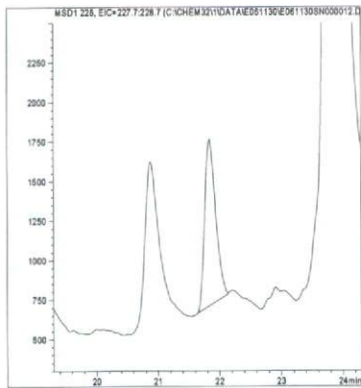
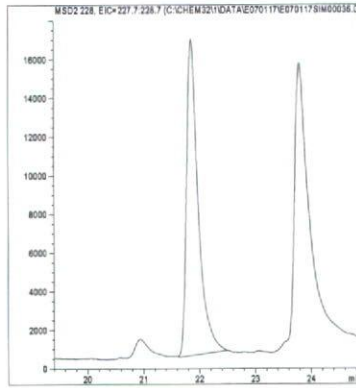


図 1. マススペクトルおよび検量線 (ドジン)

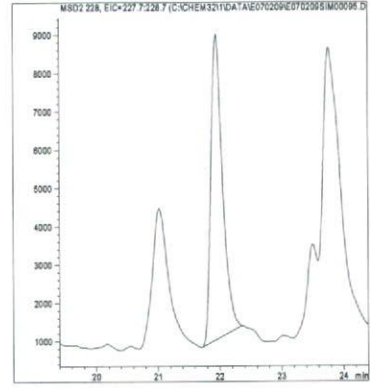
最小検出量評価 (0.001ng)



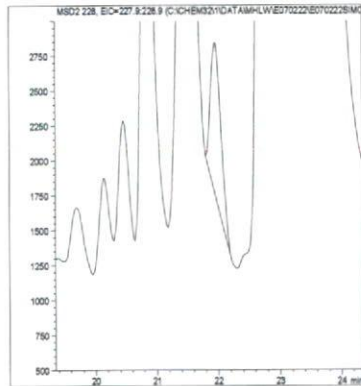
標準品 (0.05ng)



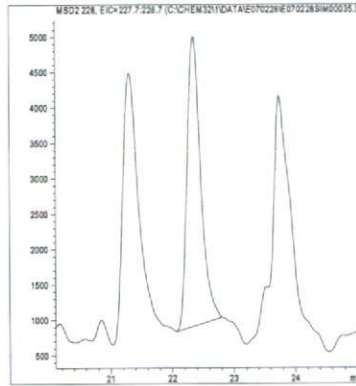
筋肉 (0.01mg/kg 添加)



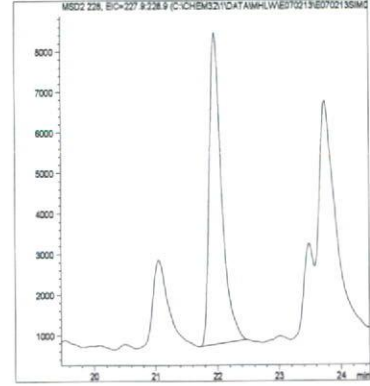
脂肪 (0.1mg/kg 添加)



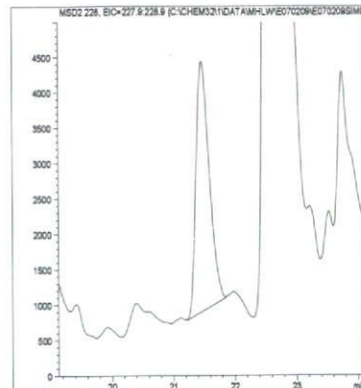
肝臓 (0.01mg/kg 添加)



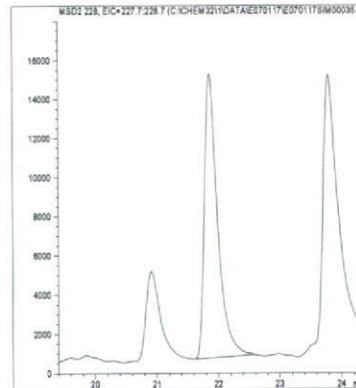
うなぎ (0.01mg/kg 添加)



えび (0.1mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

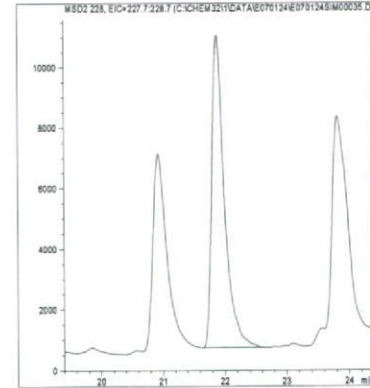
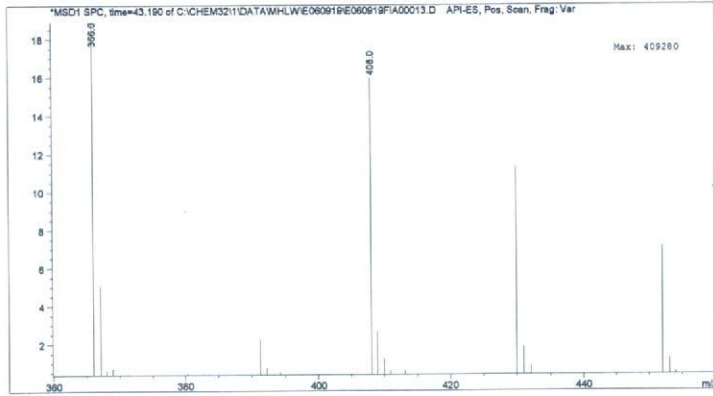


図 2. 最小検出量評価, 標準品, 回収試料のマスキロマトグラム (ドジン)

マススペクトル



検量線

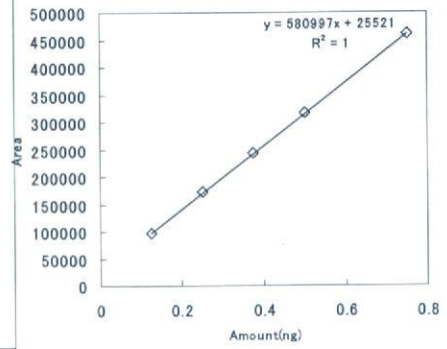
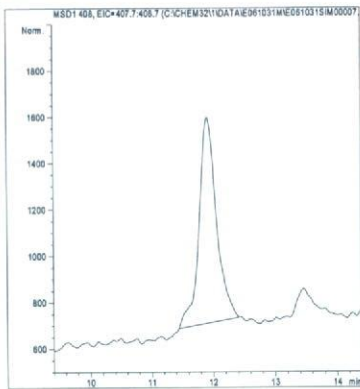
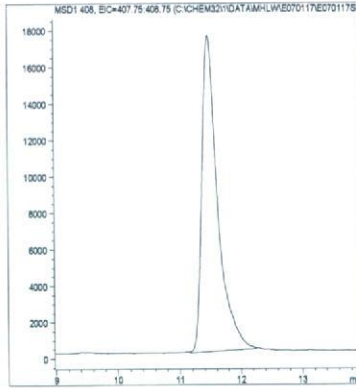


図1. マススペクトルおよび検量線 (フラザスルフロン)

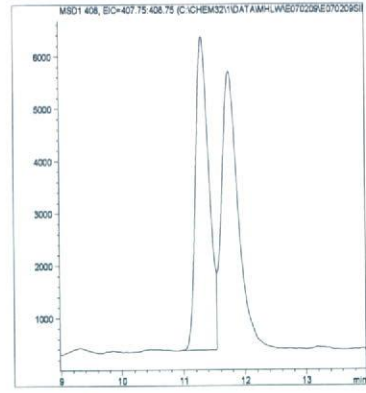
最小検出量評価 (0.0001ng)



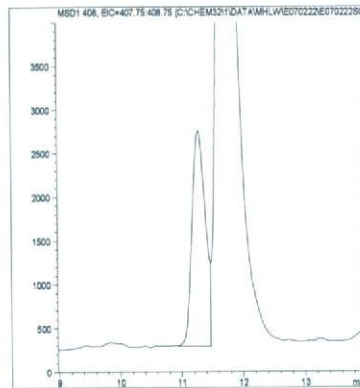
標準品 (0.5ng)



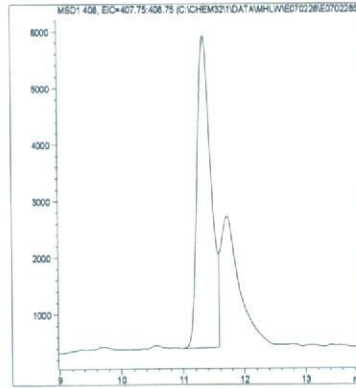
筋肉 (0.1mg/kg 添加)



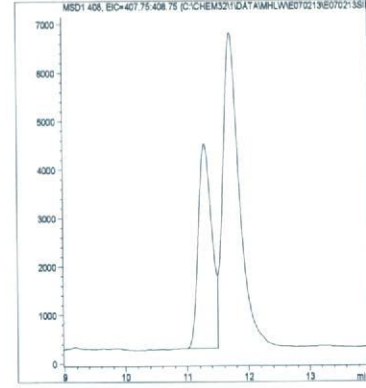
脂肪 (0.1mg/kg 添加)



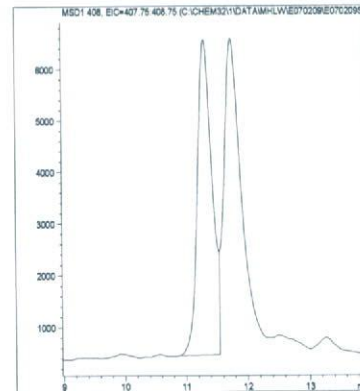
肝臓 (0.1mg/kg 添加)



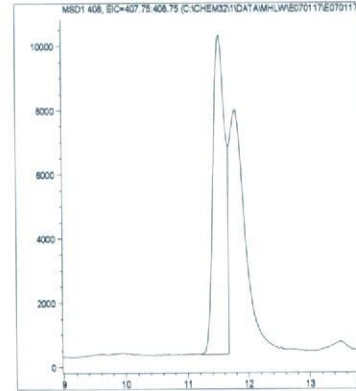
うなぎ (0.1mg/kg 添加)



えび (0.1mg/kg 添加)



牛乳 (0.1mg/kg 添加)



卵 (0.1mg/kg 添加)

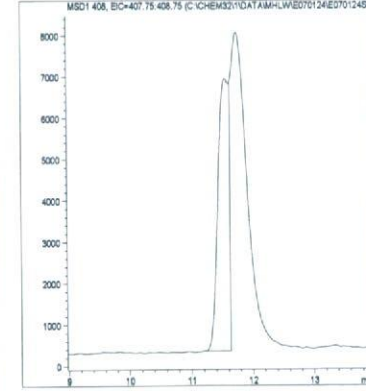
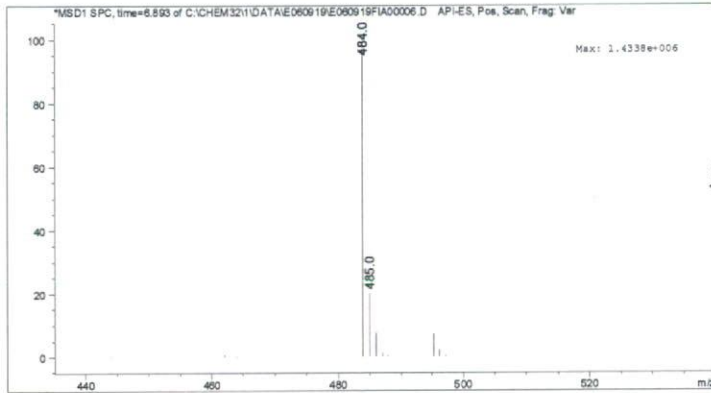


図2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (フラザスルフロン)

マススペクトル



検量線

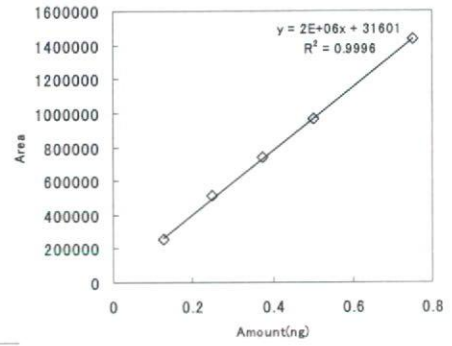
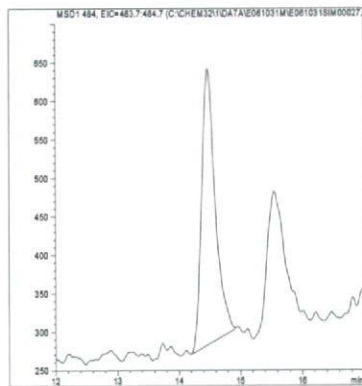
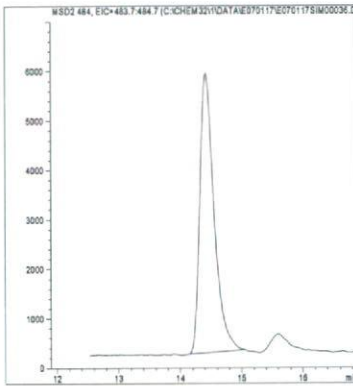


図1. マススペクトルおよび検量線 (ペノキスラム)

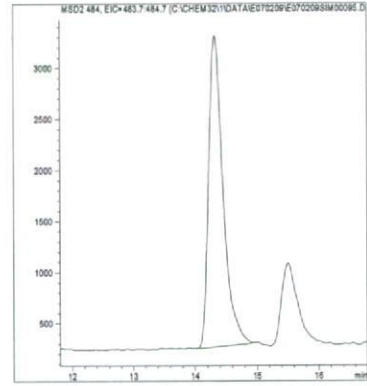
最小検出量評価 (0.0005ng)



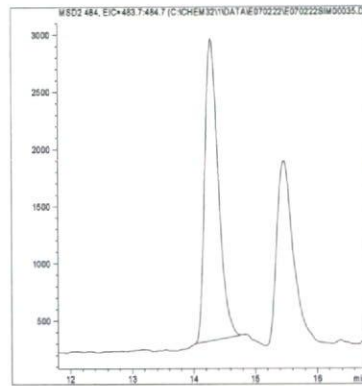
標準品 (0.05ng)



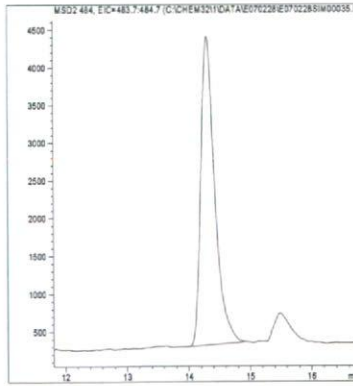
筋肉 (0.01mg/kg 添加)



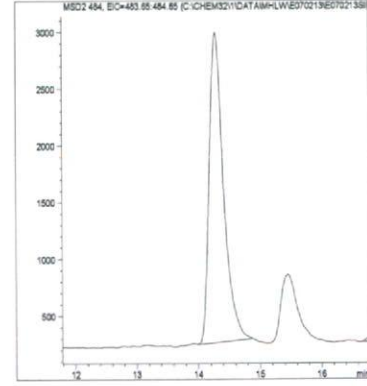
脂肪 (0.01mg/kg 添加)



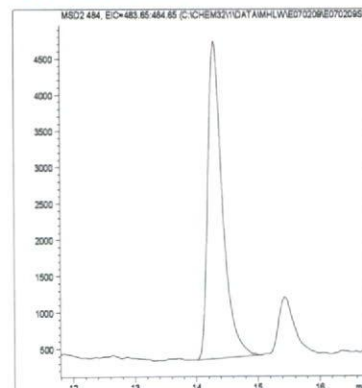
肝臓 (0.01mg/kg 添加)



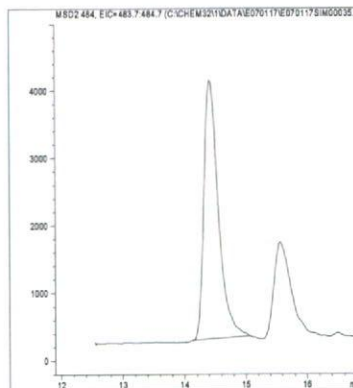
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

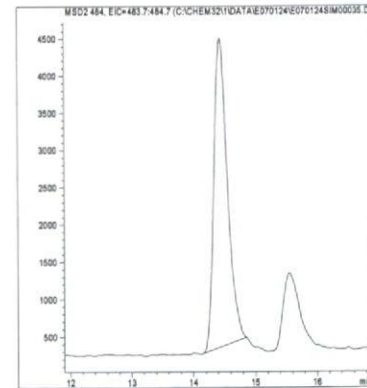
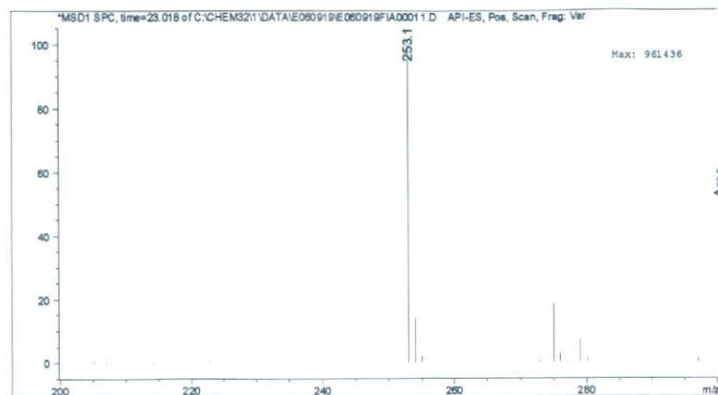


図2. 最小検出量評価, 標準品, 回収試料のマスキロマトグラム (ペノキスラム)

マススペクトル



検量線

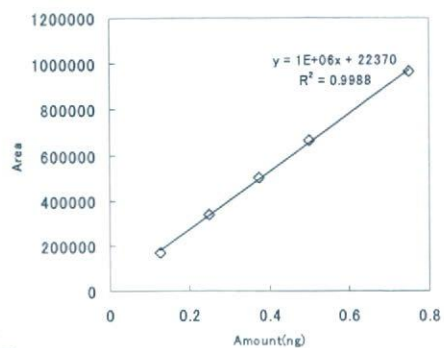
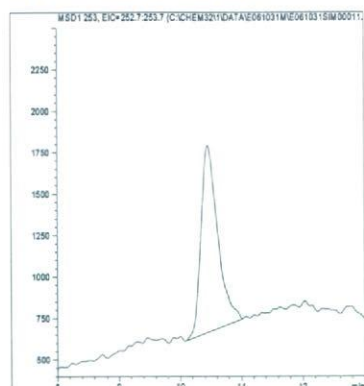
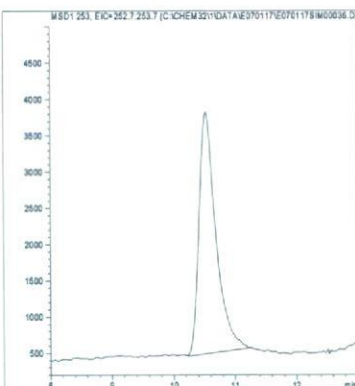


図1. マススペクトルおよび検量線 (トリネキサパックエチル)

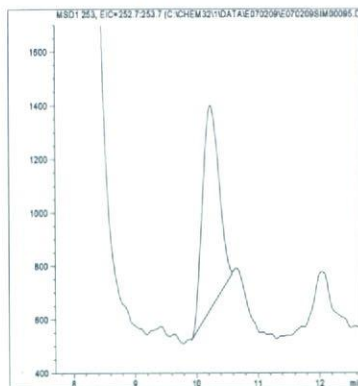
最小検出量評価 (0.005ng)



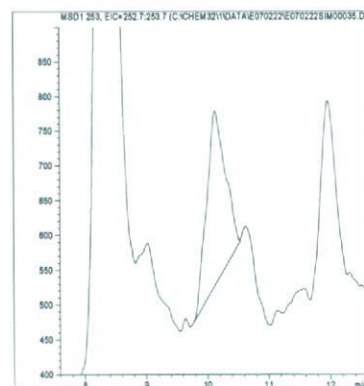
標準品 (0.05ng)



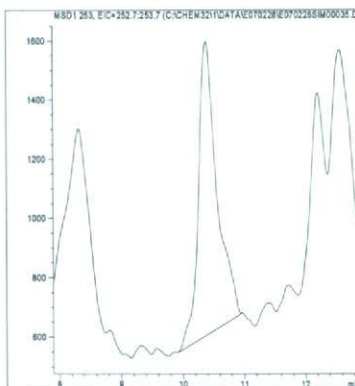
筋肉 (0.01mg/kg 添加)



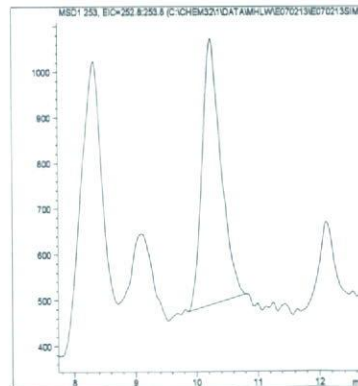
脂肪 (0.01mg/kg 添加)



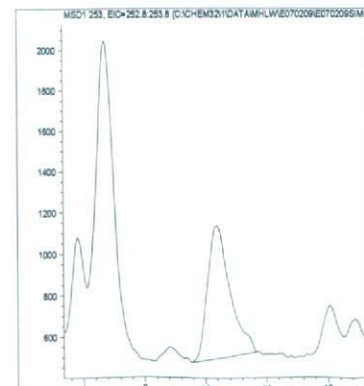
肝臓 (0.01mg/kg 添加)



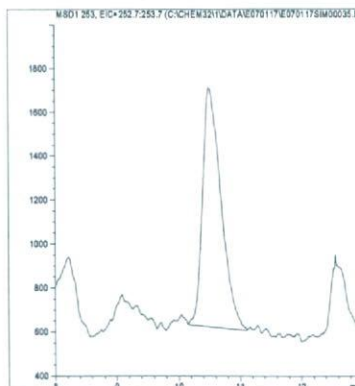
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

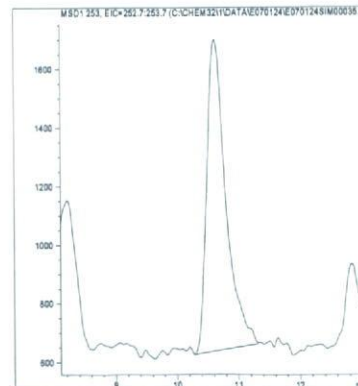
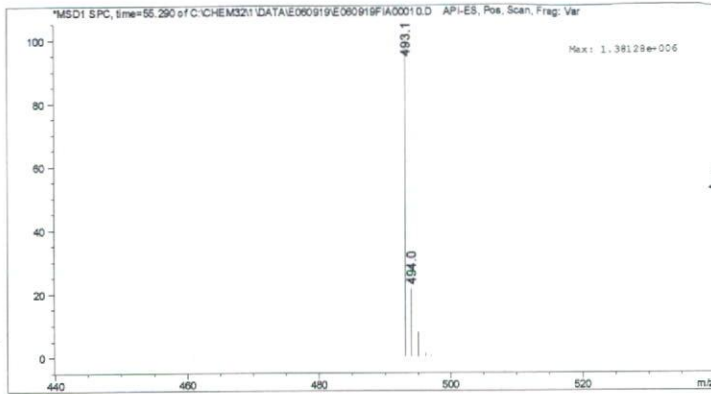


図2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (トリネキサパックエチル)

マススペクトル



検量線

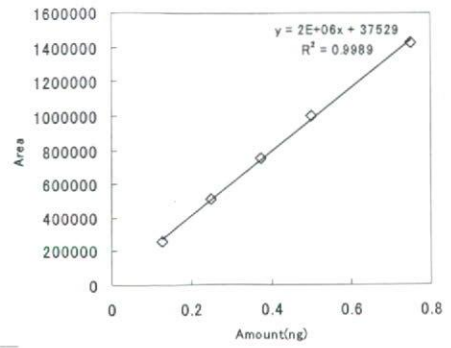
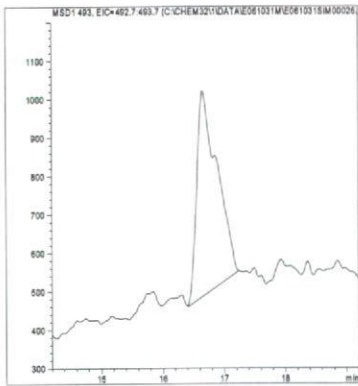
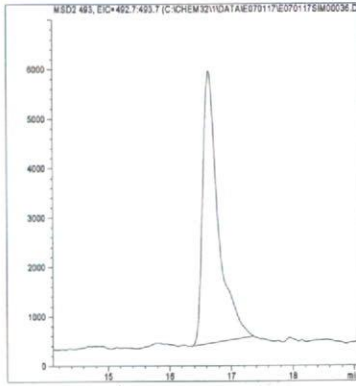


図 1. マススペクトルおよび検量線 (トリフルスルフロメチル)

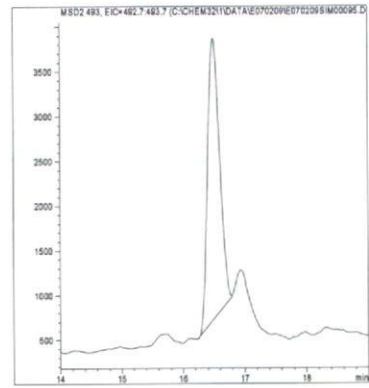
最小検出量評価 (0.001ng)



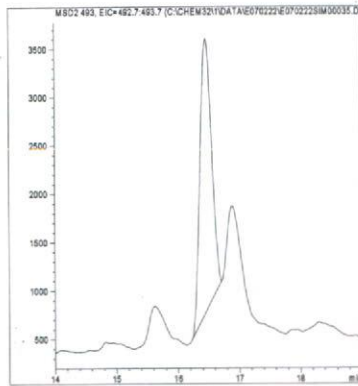
標準品 (0.05ng)



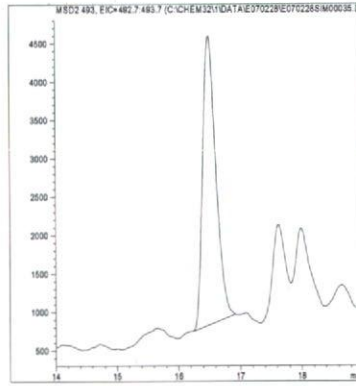
筋肉 (0.01mg/kg 添加)



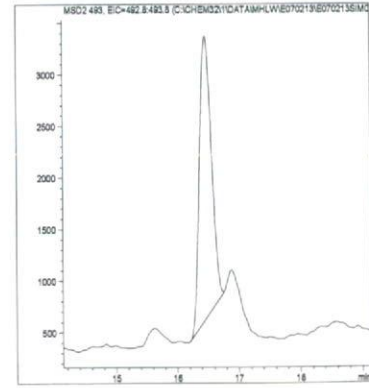
脂肪 (0.01mg/kg 添加)



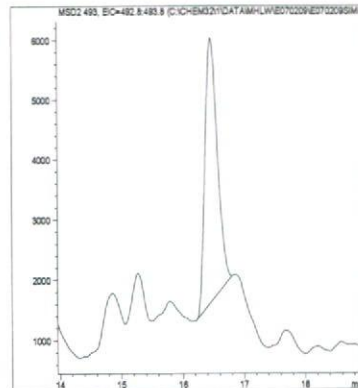
肝臓 (0.01mg/kg 添加)



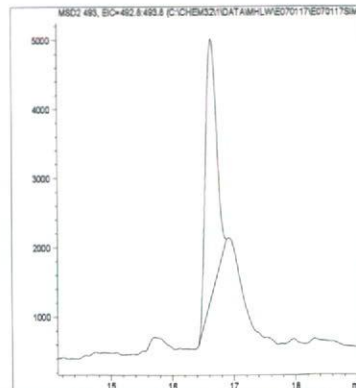
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

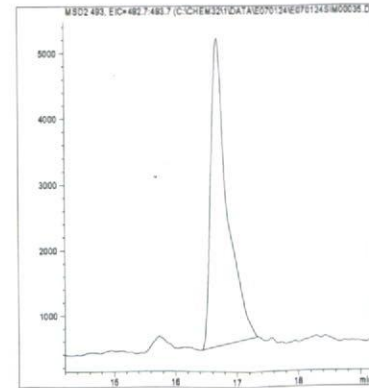
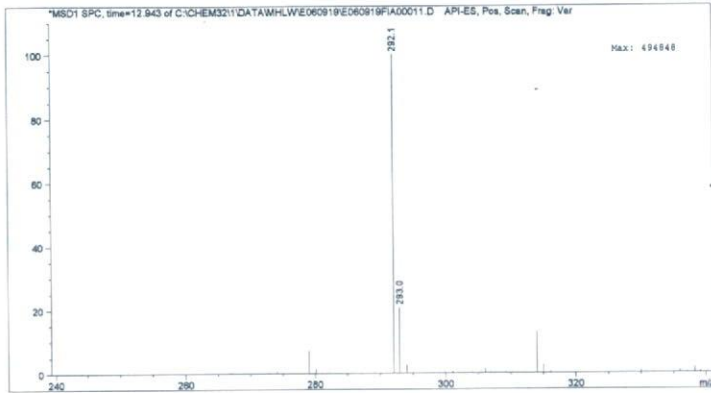


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (トリフルスルフロメチル)

マススペクトル



検量線

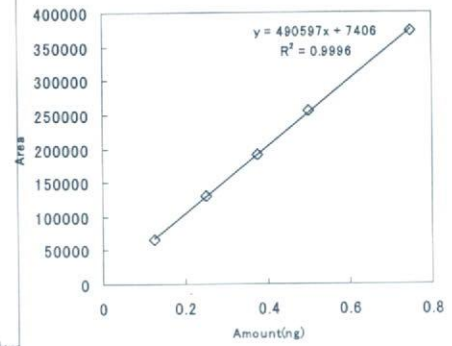
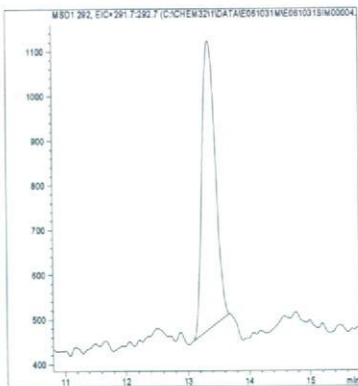
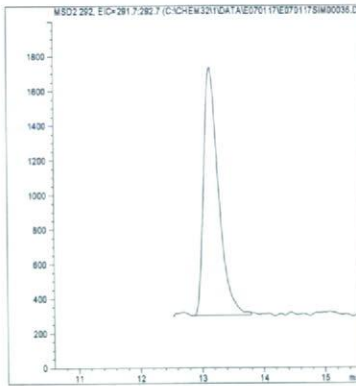


図 1. マススペクトルおよび検量線 (ナブタラム)

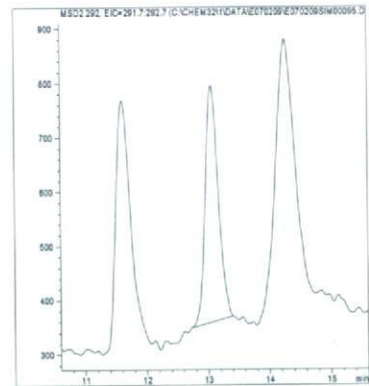
最小検出量評価 (0.005ng)



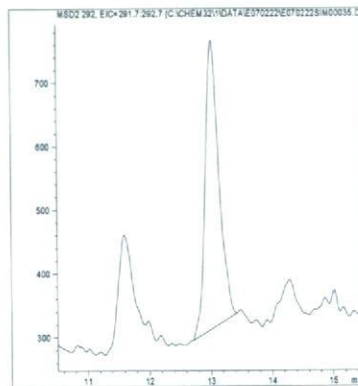
標準品 (0.05ng)



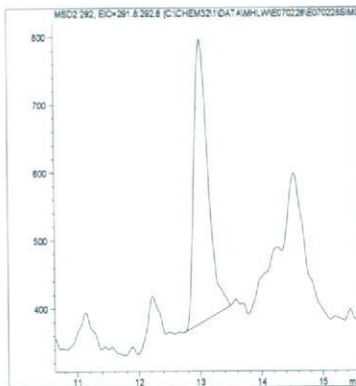
筋肉 (0.01mg/kg 添加)



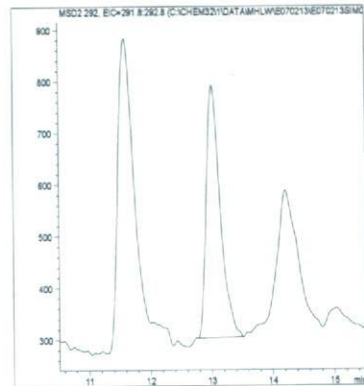
脂肪 (0.01mg/kg 添加)



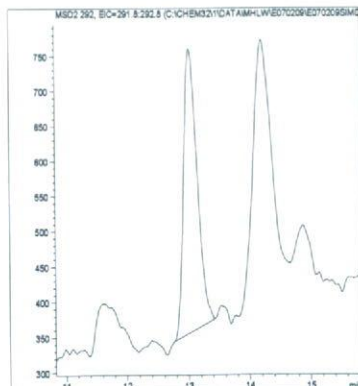
肝臓 (0.01mg/kg 添加)



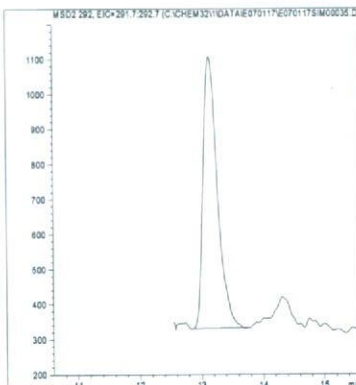
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

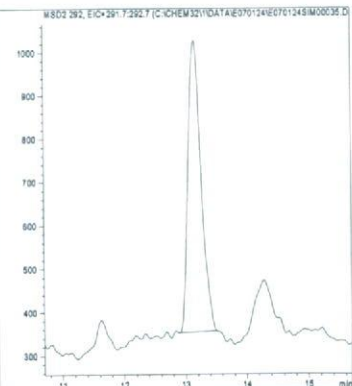
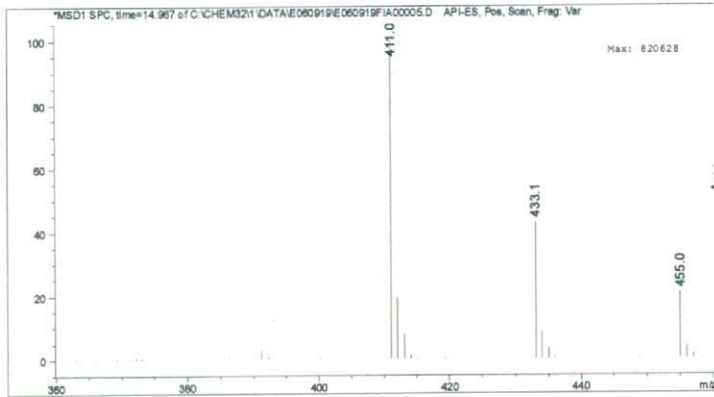


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (ナブタラム)

マススペクトル



検量線

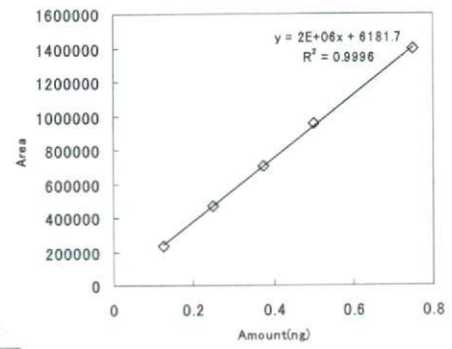
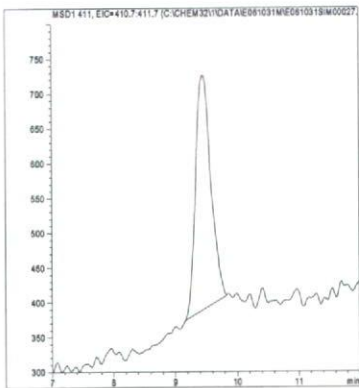
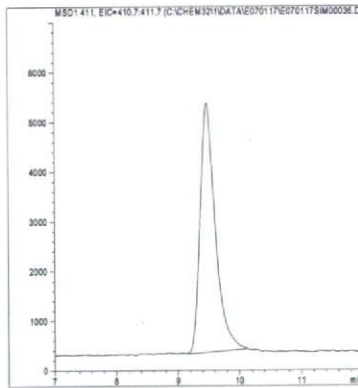


図 1. マススペクトルおよび検量線 (ニコスルフロンの)

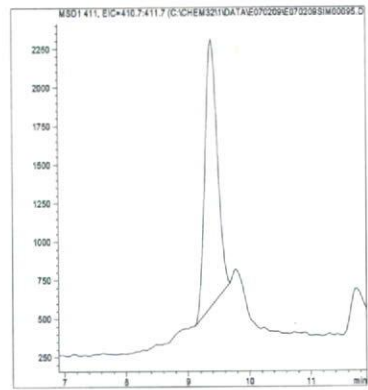
最小検出量評価 (0.0005ng)



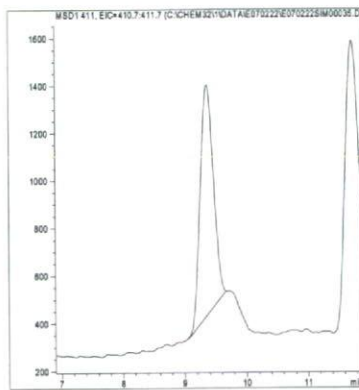
標準品 (0.05ng)



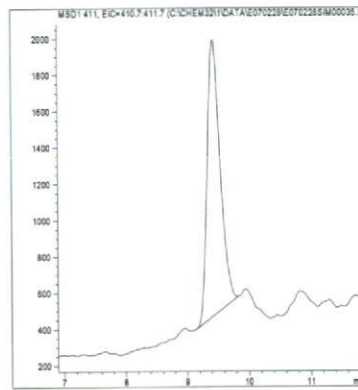
筋肉 (0.01mg/kg 添加)



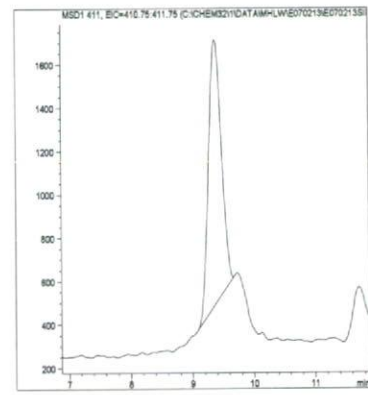
脂肪 (0.01mg/kg 添加)



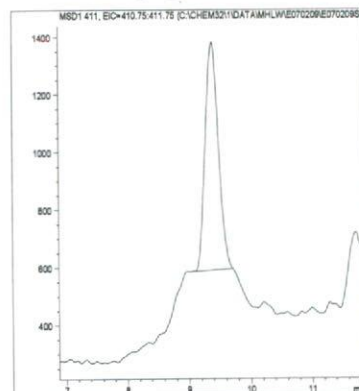
肝臓 (0.01mg/kg 添加)



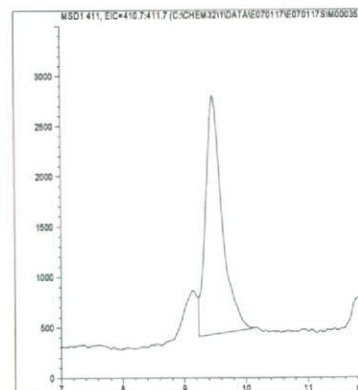
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

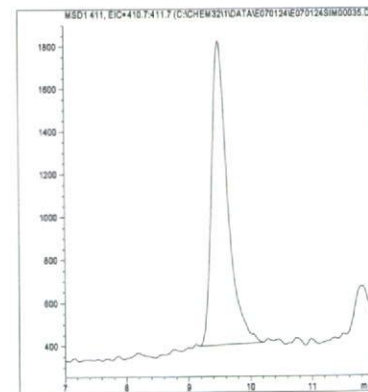
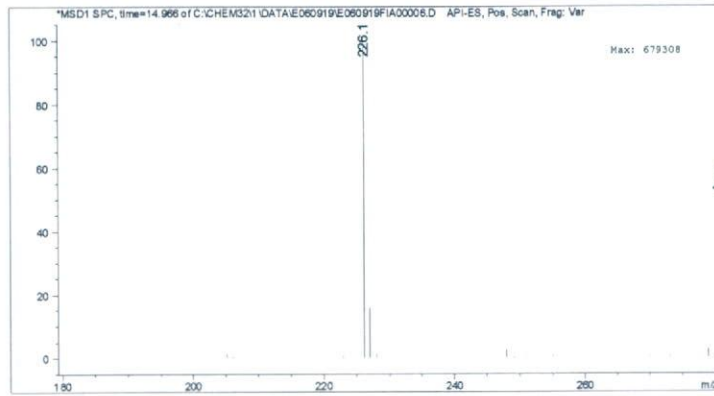


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (ニコスルフロンの)

マススペクトル



検量線

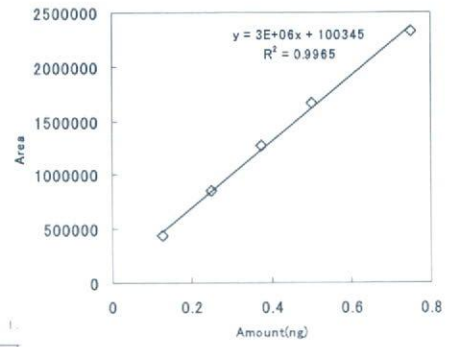
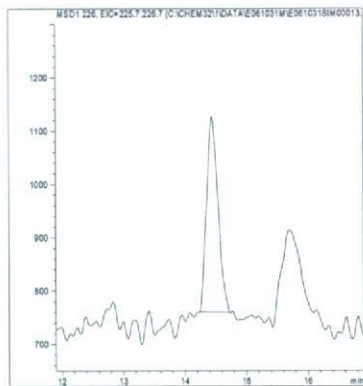
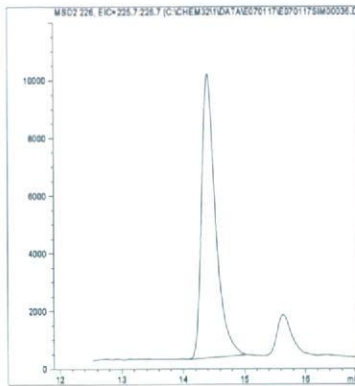


図 1. マススペクトルおよび検量線 (ベンジルアミノプリン)

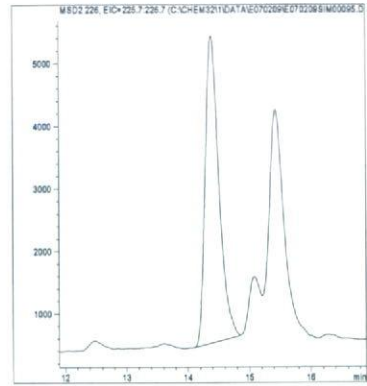
最小検出量評価 (0.0005ng)



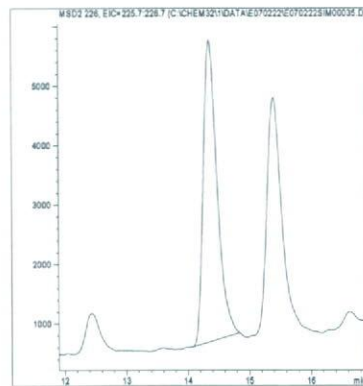
標準品 (0.05ng)



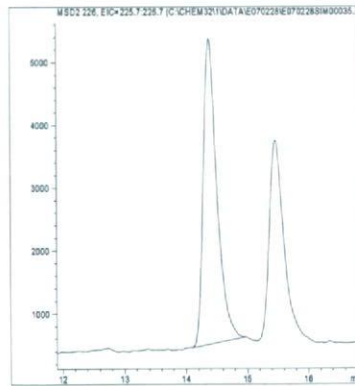
筋肉 (0.01mg/kg 添加)



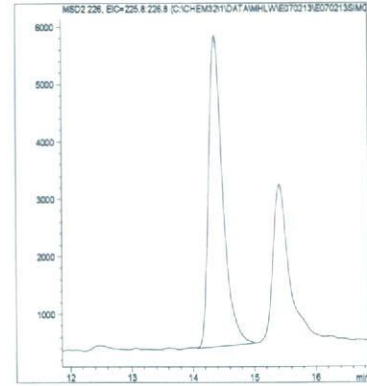
脂肪 (0.01mg/kg 添加)



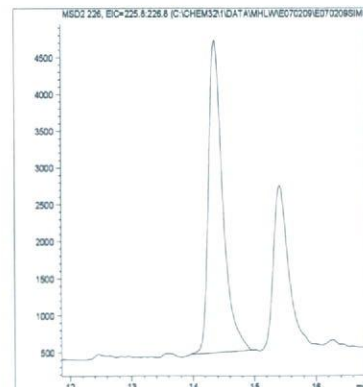
肝臓 (0.01mg/kg 添加)



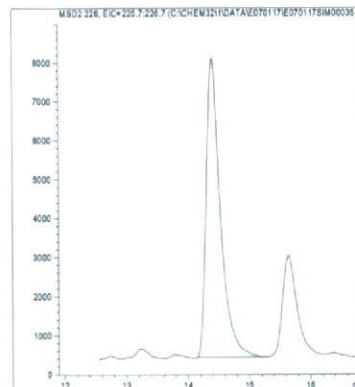
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

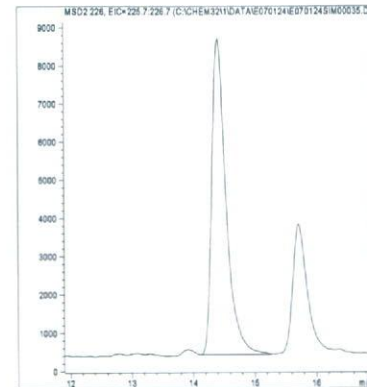
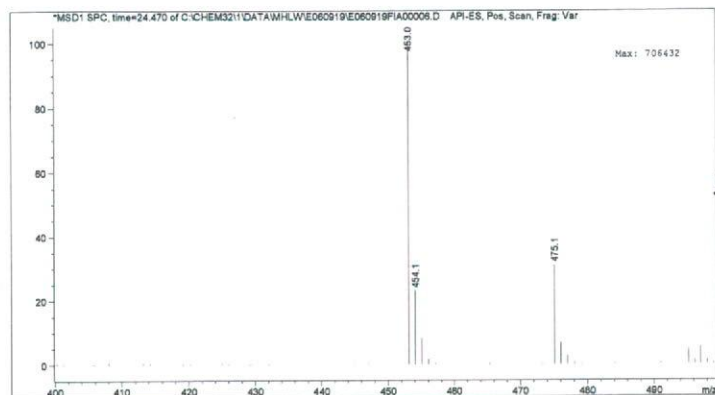


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (ベンジルアミノプリン)

マススペクトル



検量線

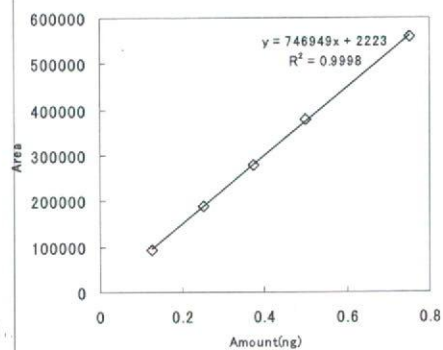
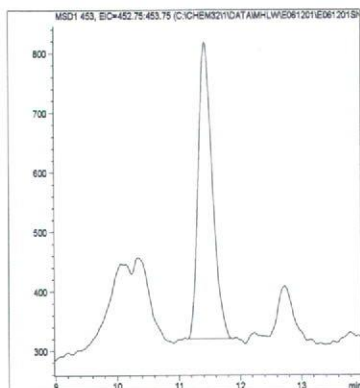
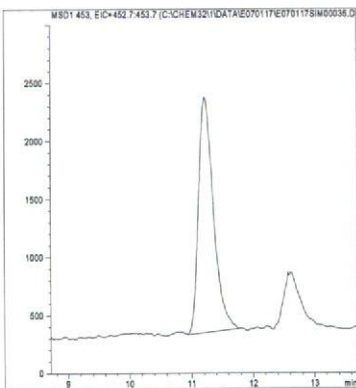


図1. マススペクトルおよび検量線 (ホラムスルフロン)

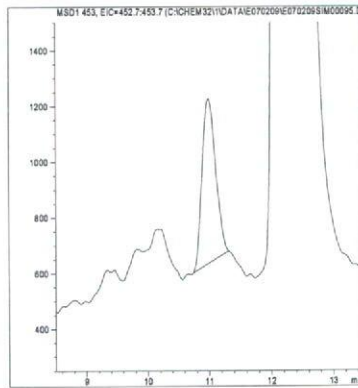
最小検出量評価 (0.001ng)



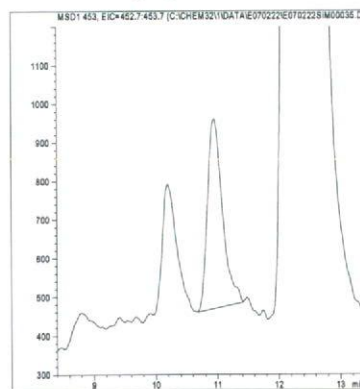
標準品 (0.05ng)



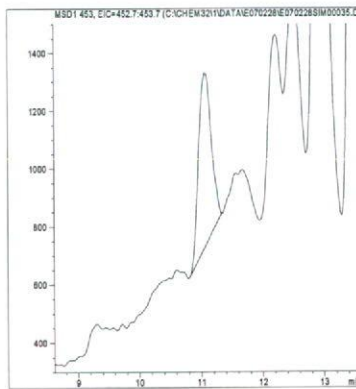
筋肉 (0.01mg/kg 添加)



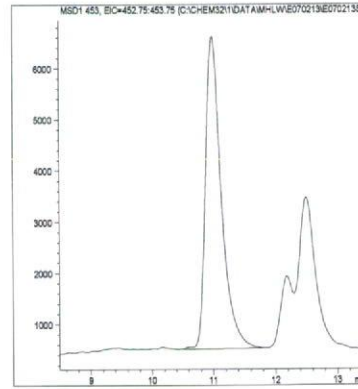
脂肪 (0.01mg/kg 添加)



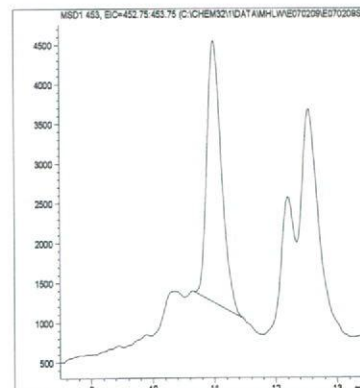
肝臓 (0.01mg/kg 添加)



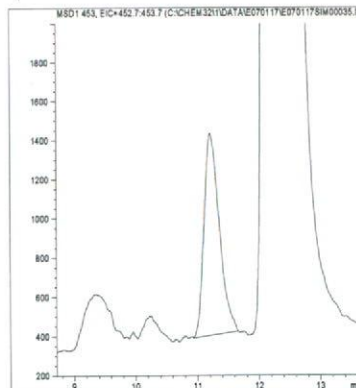
うなぎ (0.1mg/kg 添加)



えび (0.1mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

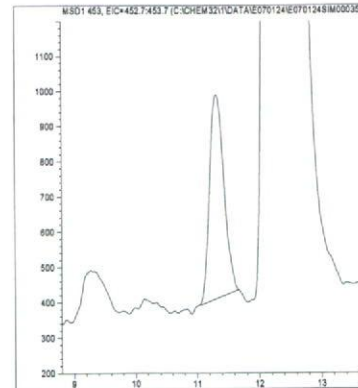
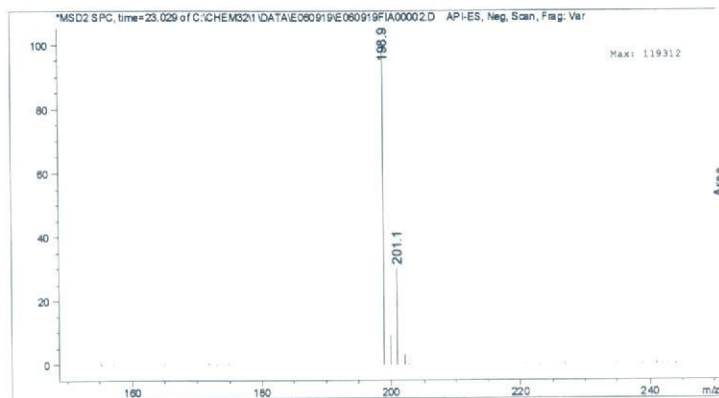


図2. 最小検出量評価, 標準品, 回収試料のマスキロマトグラム (ホラムスルフロン)

マススペクトル



検量線

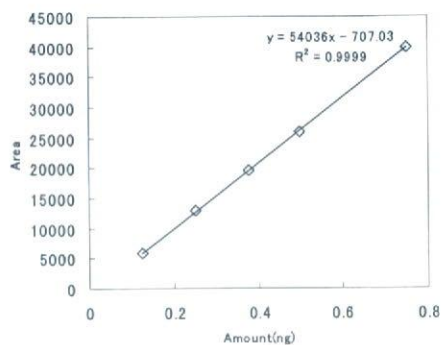
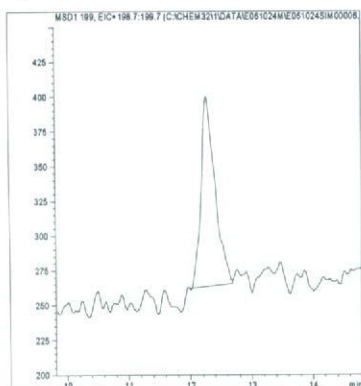
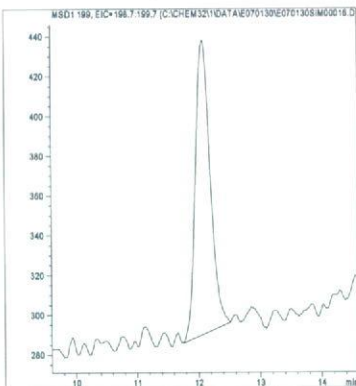


図 1. マススペクトルおよび検量線 (クロブロップ)

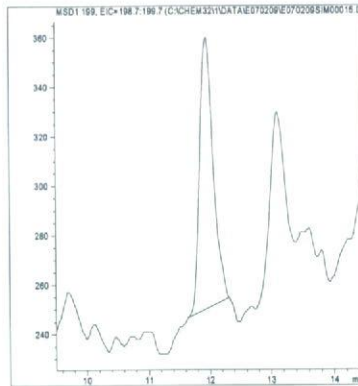
最小検出量評価 (0.01ng)



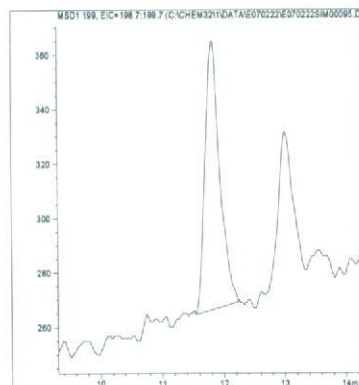
標準品 (0.05ng)



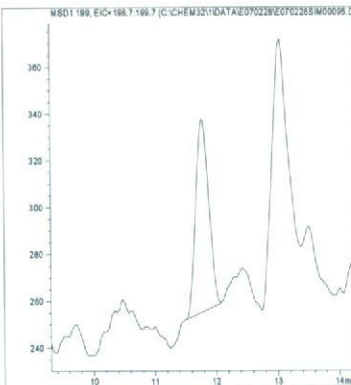
筋肉 (0.01mg/kg 添加)



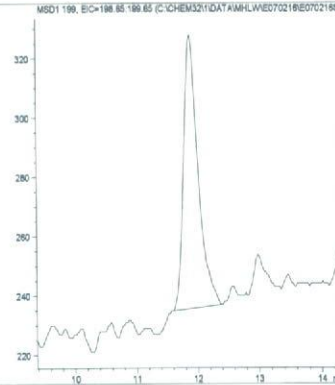
脂肪 (0.01mg/kg 添加)



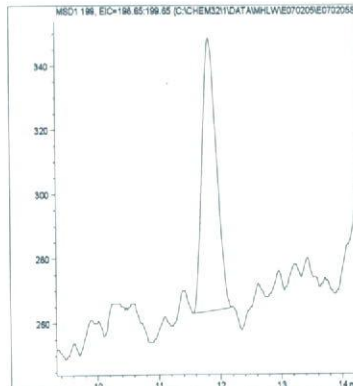
肝臓 (0.01mg/kg 添加)



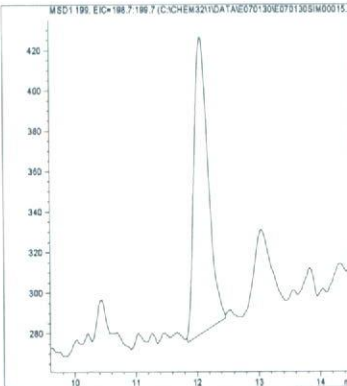
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

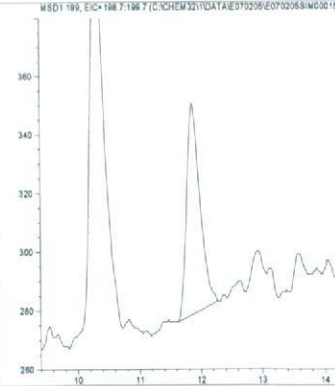
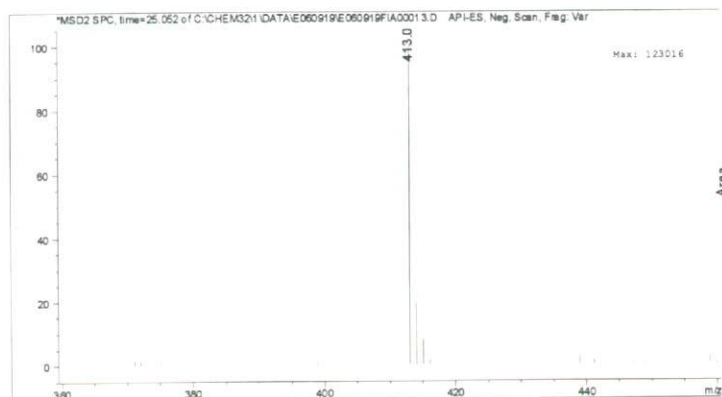


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (クロブロップ)

マススペクトル



検量線

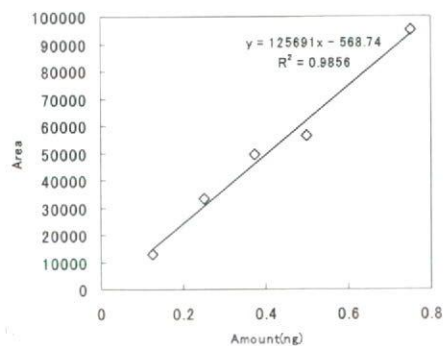
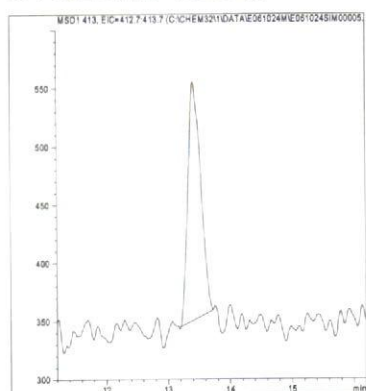
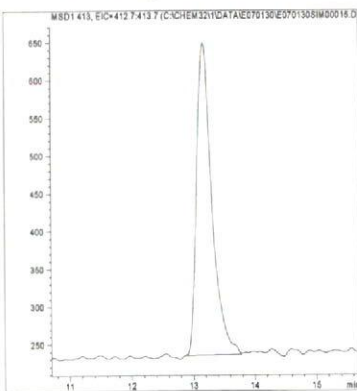


図1. マススペクトルおよび検量線 (ピラゾスルフロエチル)

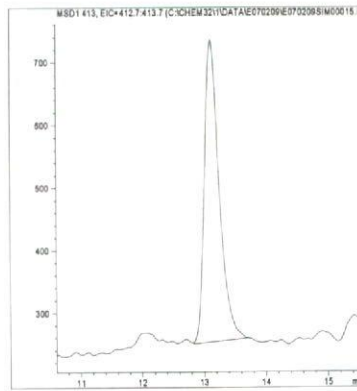
最小検出量評価 (0.005ng)



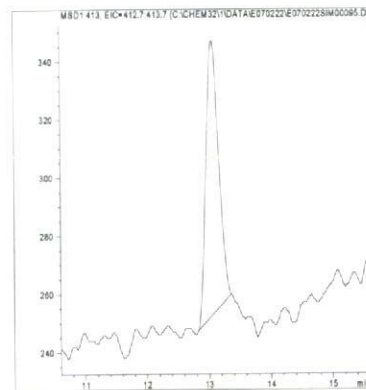
標準品 (0.05ng)



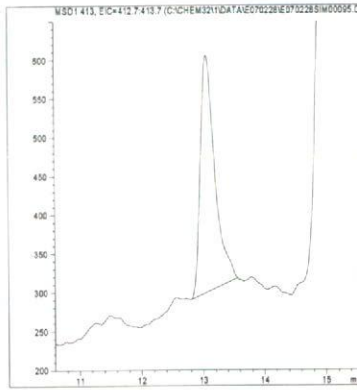
筋肉 (0.01mg/kg 添加)



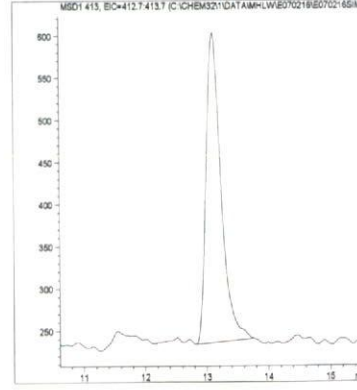
脂肪 (0.01mg/kg 添加)



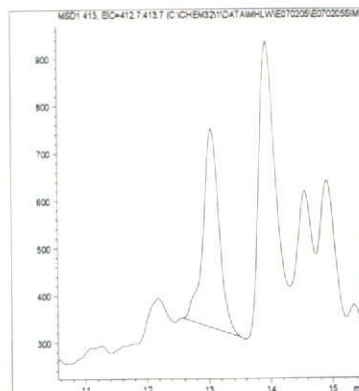
肝臓 (0.01mg/kg 添加)



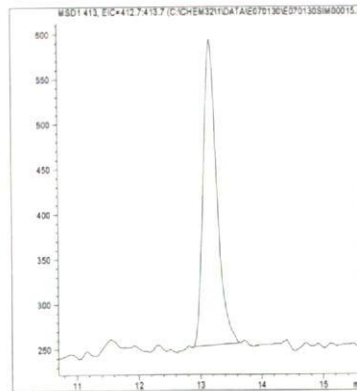
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

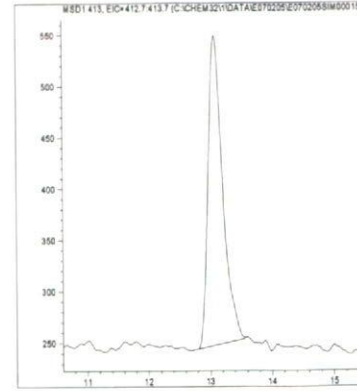
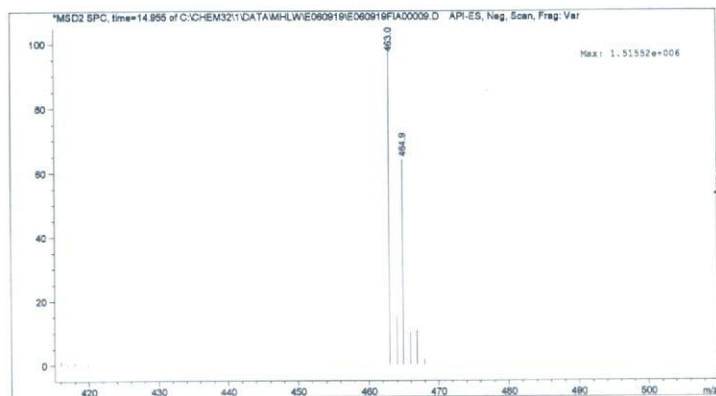


図2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (ピラゾスルフロエチル)

マススペクトル



検量線

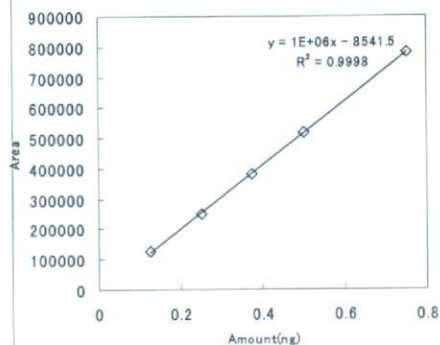
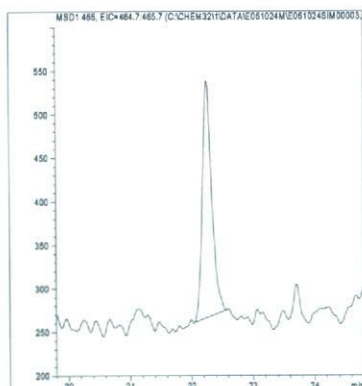
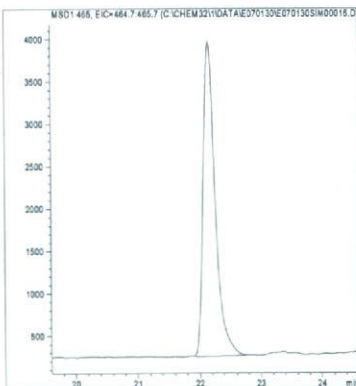


図 1. マススペクトルおよび検量線 (フルアジナム)

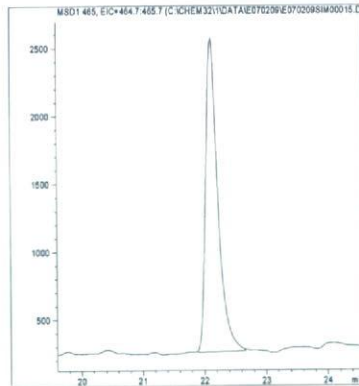
最小検出量評価 (0.0005ng)



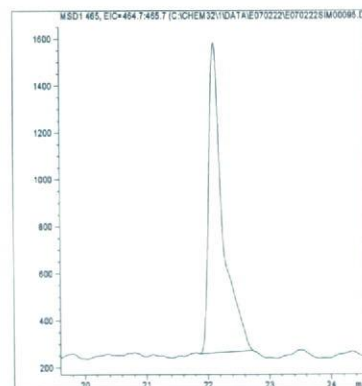
標準品 (0.05ng)



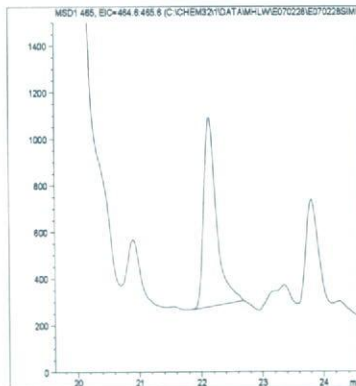
筋肉 (0.01mg/kg 添加)



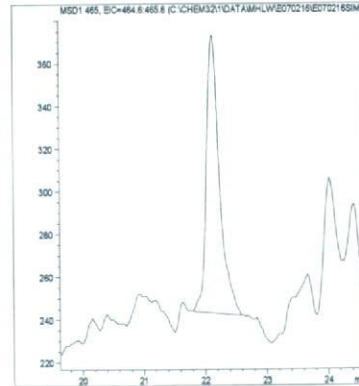
脂肪 (0.01mg/kg 添加)



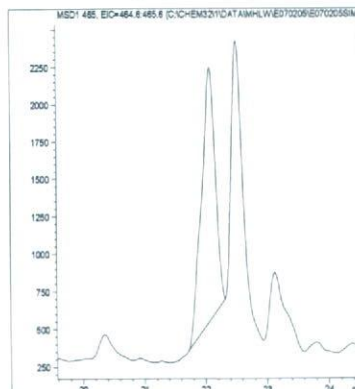
肝臓 (0.01mg/kg 添加)



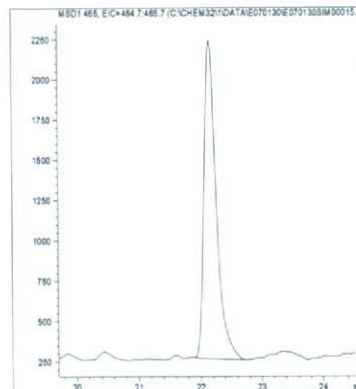
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

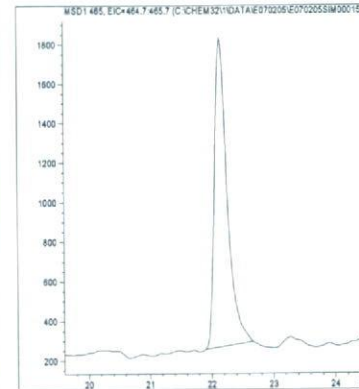
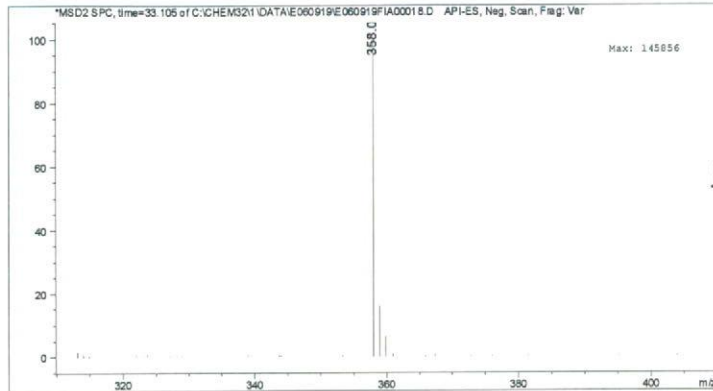


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (フルアジナム)

マススペクトル



検量線

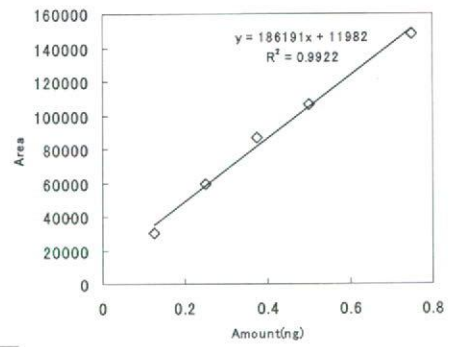
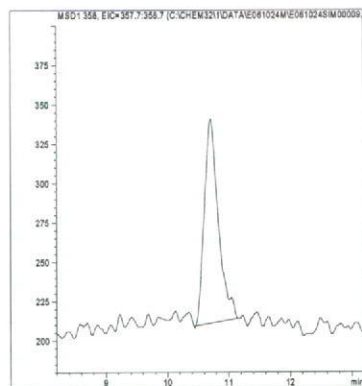
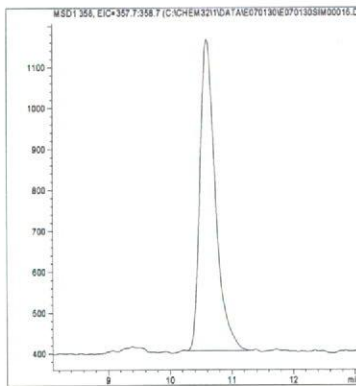


図 1. マススペクトルおよび検量線 (フロラスラム)

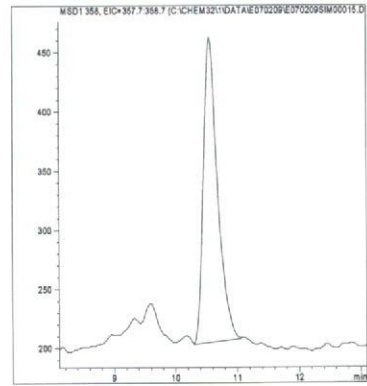
最小検出量評価 (0.01ng)



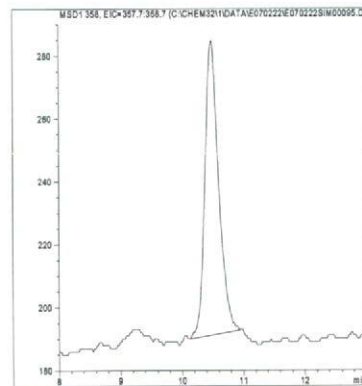
標準品 (0.05ng)



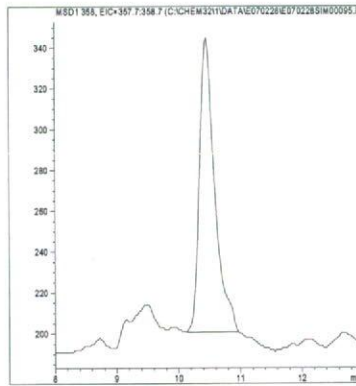
筋肉 (0.01mg/kg 添加)



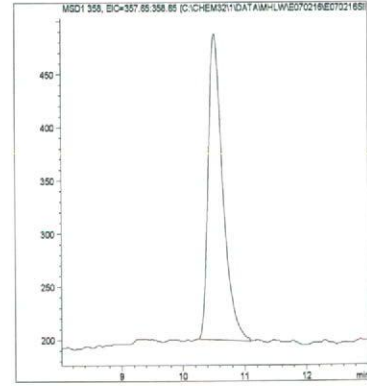
脂肪 (0.01mg/kg 添加)



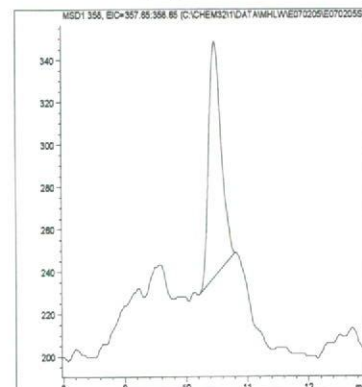
肝臓 (0.01mg/kg 添加)



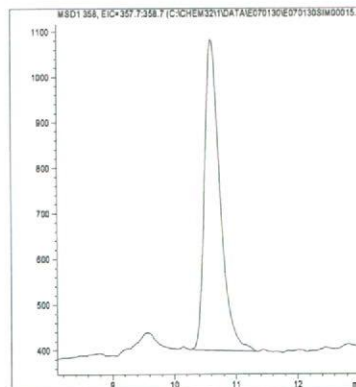
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

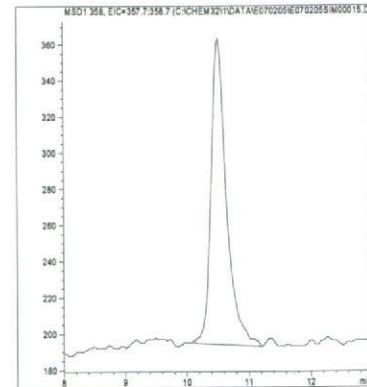
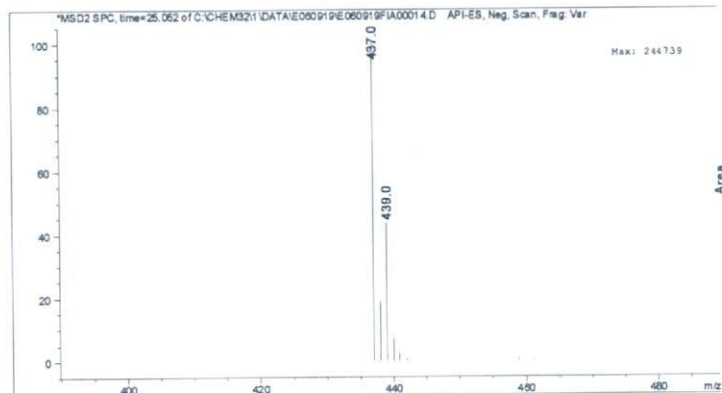


図 2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (フロラスラム)

マススペクトル



検量線

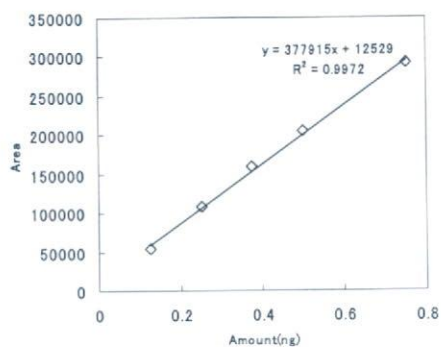
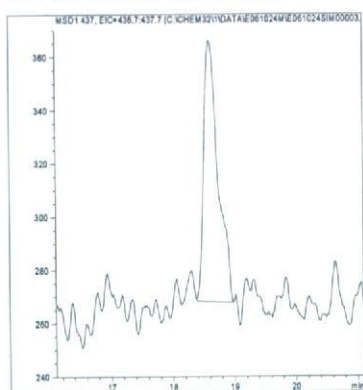
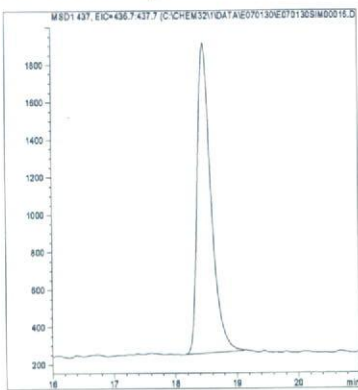


図1. マススペクトルおよび検量線 (ホメサフェン)

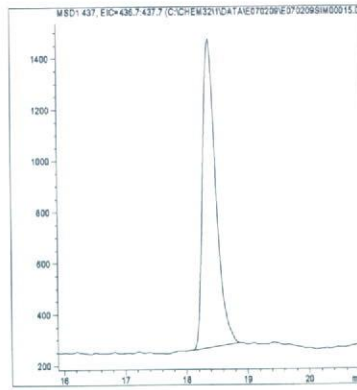
最小検出量評価 (0.0005ng)



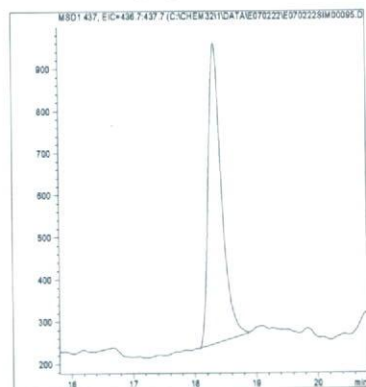
標準品 (0.05ng)



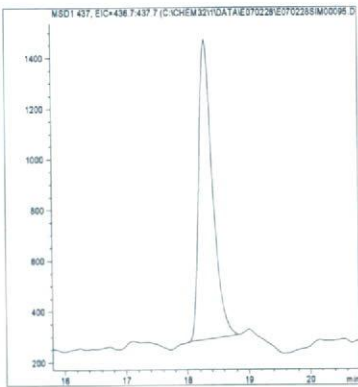
筋肉 (0.01mg/kg 添加)



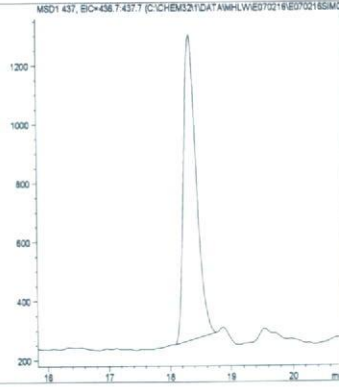
脂肪 (0.01mg/kg 添加)



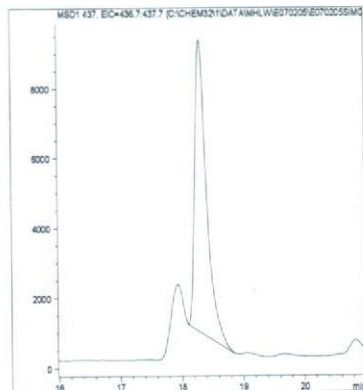
肝臓 (0.01mg/kg 添加)



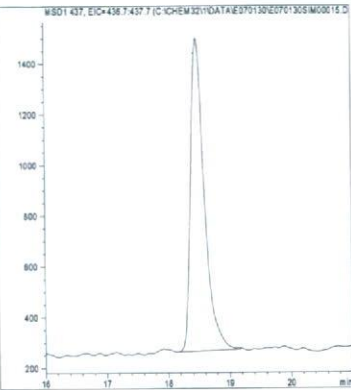
うなぎ (0.01mg/kg 添加)



えび (0.1mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

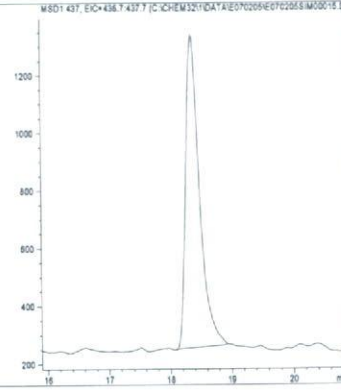
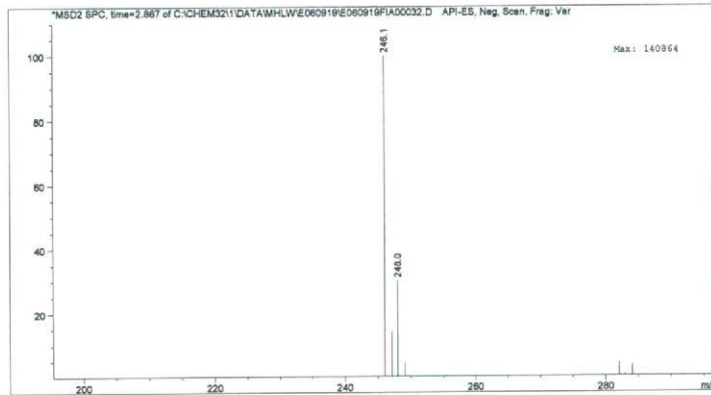


図2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (ホメサフェン)

マススペクトル



検量線

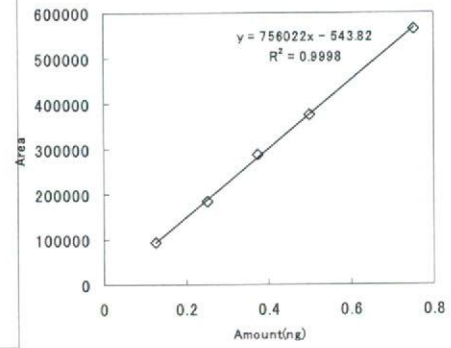
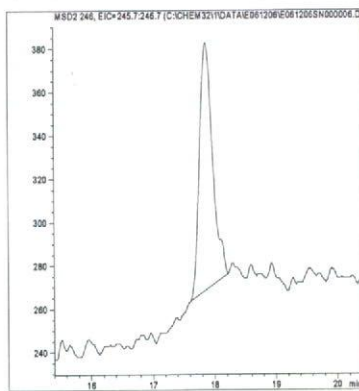
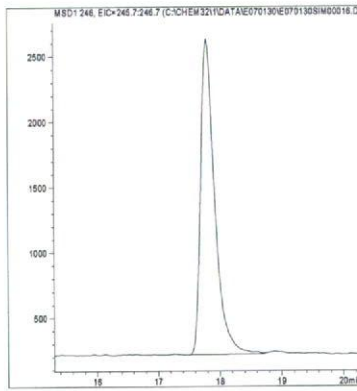


図1. マススペクトルおよび検量線 (ホルクロルフェニロン)

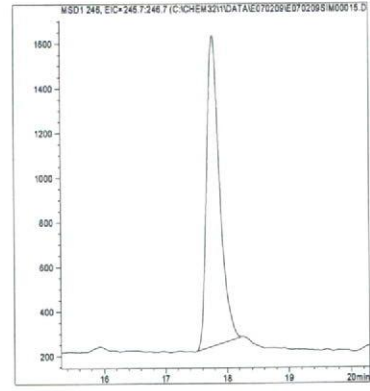
最小検出量評価 (0.0005ng)



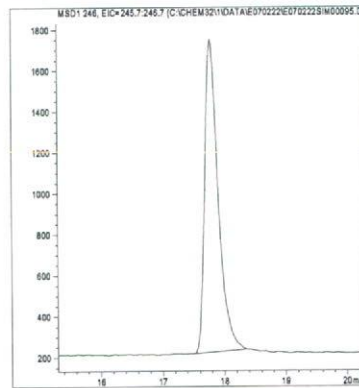
標準品 (0.05ng)



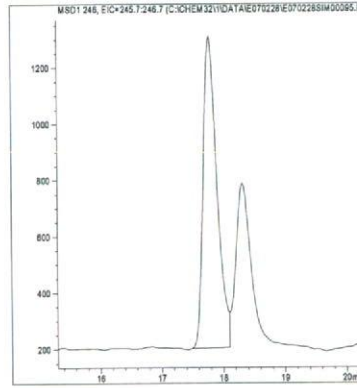
筋肉 (0.01mg/kg 添加)



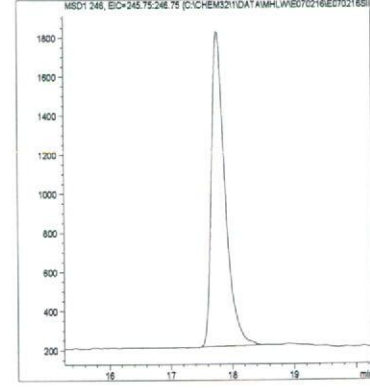
脂肪 (0.01mg/kg 添加)



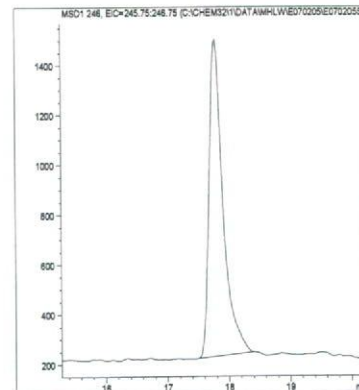
肝臓 (0.01mg/kg 添加)



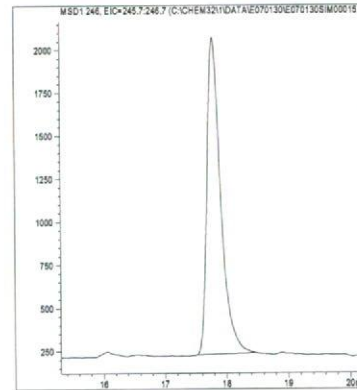
うなぎ (0.01mg/kg 添加)



えび (0.01mg/kg 添加)



牛乳 (0.01mg/kg 添加)



卵 (0.01mg/kg 添加)

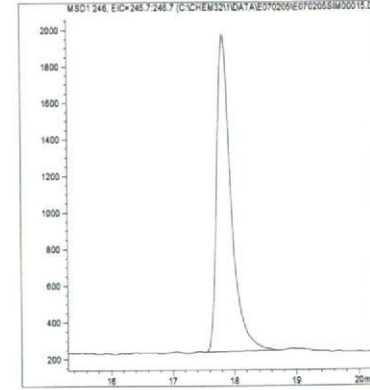


図2. 最小検出量評価, 標準品, 回収試料のマスクロマトグラム (ホルクロルフェニロン)

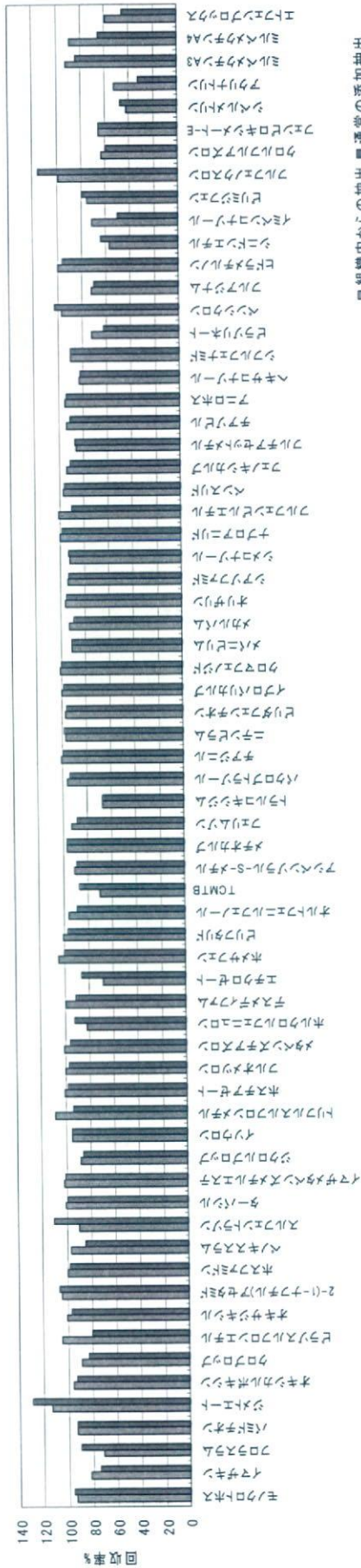
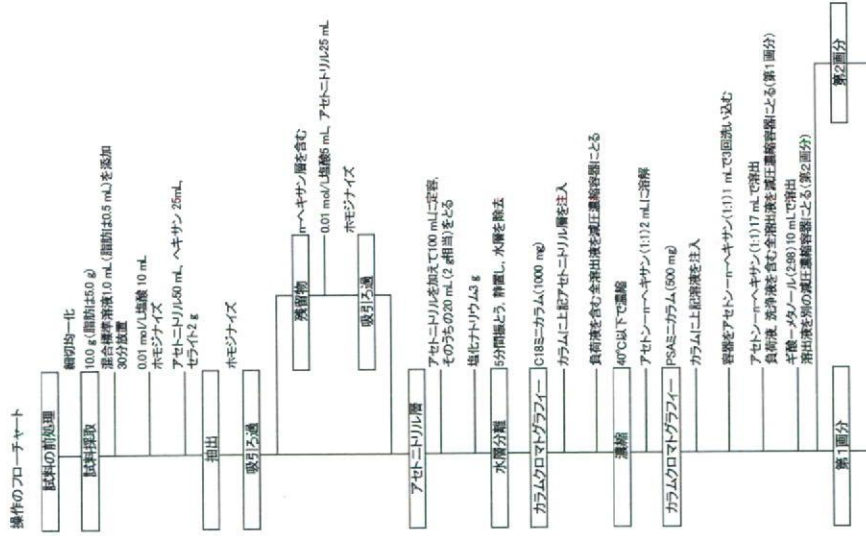


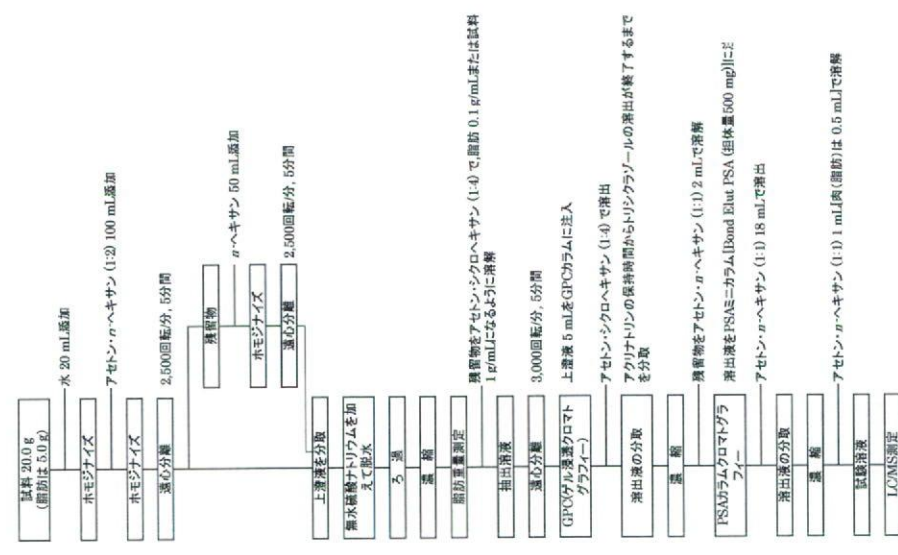
図 3-1. 牛脂肪からの回収率(新規一斉試験法による, 成分抜粋)



図 3-2. 牛脂肪からの抽出効率(新規一斉試験法による, 成分抜粋)
 添加回収率により補正。0 の時, 抽出効率が 100%であることを示す。



付図 1. 新一斉試験法案*, 分析工程の概要 (*厚生労働省で検討中)



付図 2. 既存の通知一斉試験法, 分析工程の概要

厚生労働科学研究費補助金(食品の安心・安全確保推進研究事業)

Ⅱ. 平成19年度分担研究報告書

食品中に残留する農薬等におけるリスク管理手法の精密化に関する研究

3. 魚介類への残留基準の設定法

分担研究者 加藤保博
(財団法人 残留農薬研究所)