

## Supplementary material

### **Mimonoside D: A new triterpenoid saponin from *Mimosa diplotricha* Sauvalle (Fabaceae)**

**Miss**, Claudie Fokou Kenmogne,

*Research Unit of Environmental and Applied Chemistry, Department of Chemistry, Faculty of Science, University of Dschang, Box 67, Dschang, Cameroon.*

**Dr**, Beaudelaire Kemvoufo Ponou,

*Research Unit of Environmental and Applied Chemistry, Department of Chemistry, Faculty of Science, University of Dschang, Box 67, Dschang, Cameroon.*

**Miss**, Blondelle Matio Kemkuignou,

*Department of Microbial Drugs, Helmholtz Centre for Infection Research GmbH, Inhoffenstrasse 7, 38124 Braunschweig, Germany*

**Dr**, Jonas Kühlborn,

*Johannes Gutenberg University Mainz, Department of Chemistry, Duesbergweg 10-14, D-55128 Mainz, Germany.*

**Dr**, Roland T. Tchuenguem,

*Department of Biochemistry, Faculty of Science, University of Dschang, Box 67, Dschang, Cameroon*

**Prof**, Rémy Bertrand Teponno,

*Research Unit of Environmental and Applied Chemistry, Department of Chemistry, Faculty of Science, University of Dschang, Box 67, Dschang, Cameroon.*

**Prof**, Jean Paul Dzoyem,

*Department of Biochemistry, Faculty of Science, University of Dschang, Box 67, Dschang, Cameroon*

**Prof**, Till Opatz,

*Johannes Gutenberg University Mainz, Department of Chemistry, Duesbergweg 10-14, D-55128 Mainz, Germany.*

**Prof**, Léon Azefack Taponjdjou

*Research Unit of Environmental and Applied Chemistry, Department of Chemistry, Faculty of Science, University of Dschang, Box 67, Dschang, Cameroon.*

Léon Azefack Taponjdjou: [tapondjou2001@yahoo.fr](mailto:tapondjou2001@yahoo.fr),

Beaudelaire Kemvoufo Ponou: [beaudelaireponou@yahoo.fr](mailto:beaudelaireponou@yahoo.fr)

## Abstract

A new triterpenoid saponin (Mimonoside D: 3-*O*- $\alpha$ -L-arabinopyranosyl-3 $\beta$ -hydroxyolean-12-en-28-oic acid 28-*O*- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D- glucopyranoside ester (**1**)) was isolated together with nine known compounds: 7,4'-dihydroxyflavone (**2**), kaempferol (**3**), lupeol (**4**), betulinic acid (**5**),  $\beta$ -sitosterol (**6**),  $\beta$ -sitosterol-3-*O*- $\beta$ -D-glucopyranoside (**7**), lutein (**8**) and 5,2'-dihydroxy-7,4',5'-trimethoxyflavone (**9**) and vitexin (**10**) from the aerial parts of *Mimosa diplotricha* Sauvalle. Their structures were elucidated on the basis of spectroscopic (1D and 2D nuclear magnetic resonance) and high-resolution mass spectrometric data as well as by comparison of their spectral data with those of related compounds. Compounds **2**, **7** and **8** had already been isolated from *M. diplotricha*, while compounds **3**, **4**, **5** and **6** had been isolated from other *Mimosa* species. Compound **2** moderately inhibited *Proteus mirabilis* (MIC = 32  $\mu$ g/mL), weakly inhibited *Pseudomonas aeruginosa* (MIC = 64  $\mu$ g/mL) and very weakly inhibited *Staphylococcus aureus* (MIC = 128  $\mu$ g/mL) and *Enterococcus faecalis* (MIC = 128  $\mu$ g/mL).

**Key words:** Fabaceae, *Mimosa diplotricha*, triterpenoid saponin, antimicrobial activity.

## List of contents

**Figure S1.** HR ESIMS spectrum of compound **1**

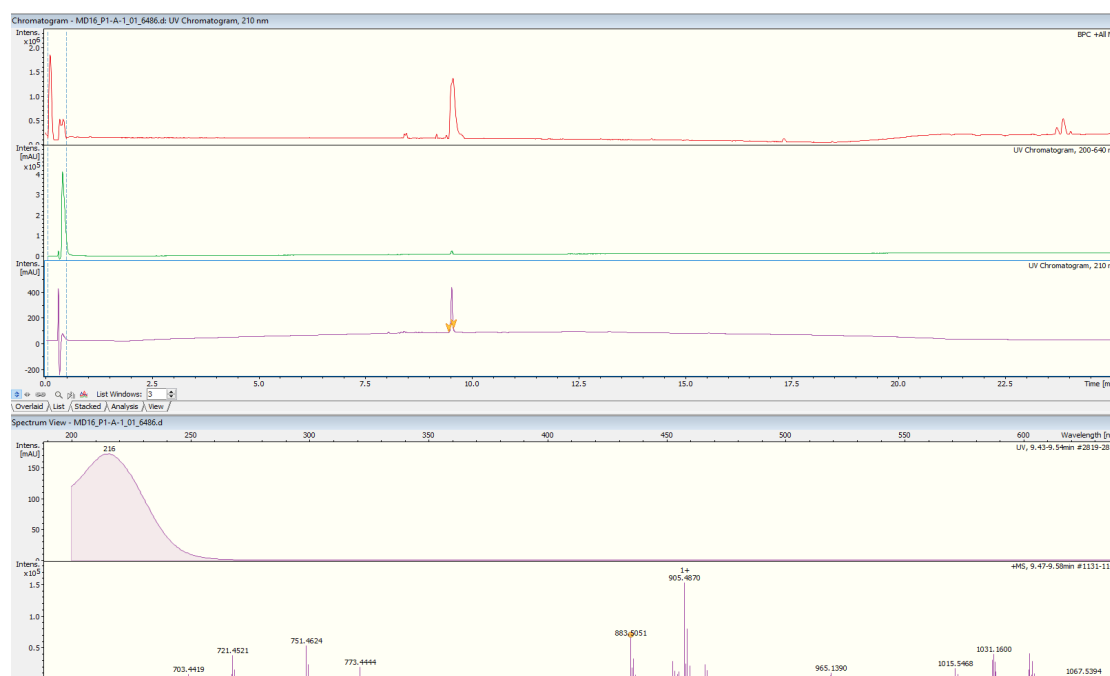
**Figure S2.**  $^1\text{H}$  NMR spectrum of compound **1**

**Figure S3.**  $^{13}\text{C}$  NMR spectrum of compound **1**

**Figure S4.** HSQC spectrum of compound **1**

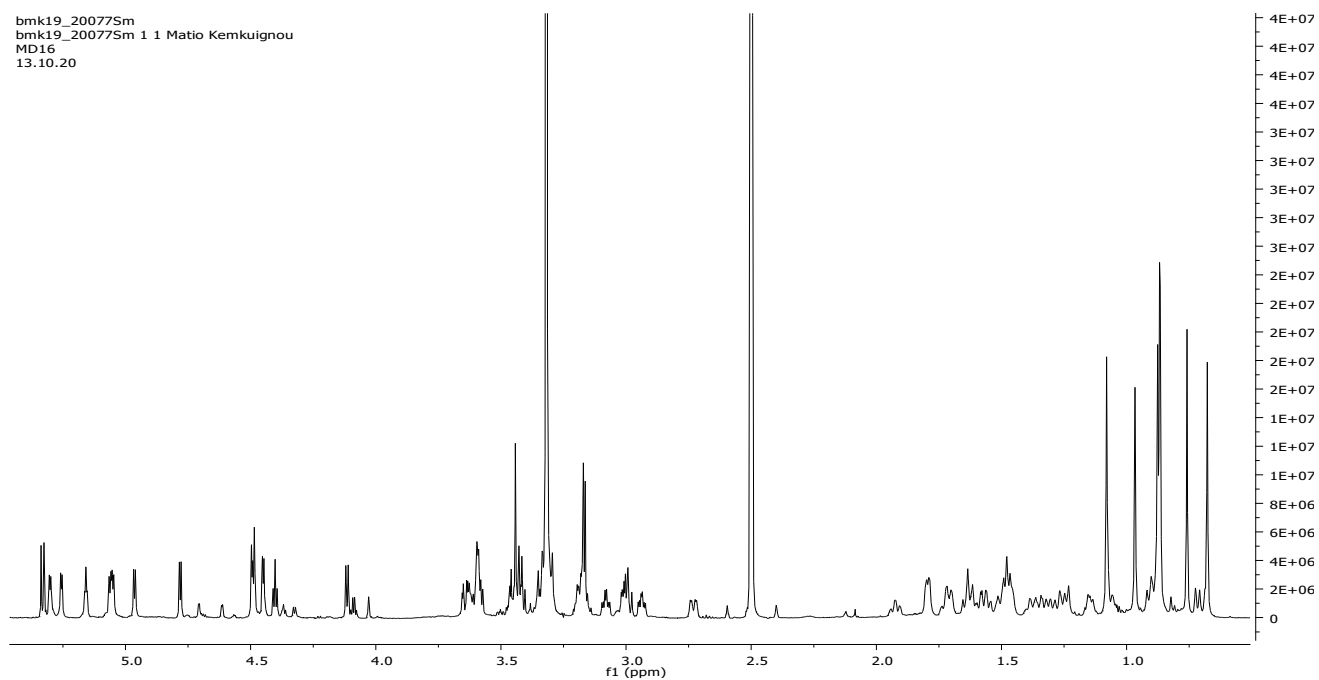
**Figure S5.**  $^1\text{H}$ ,  $^1\text{H}$  COSY spectrum of compound **1**

**Figure S6.** HMBC spectrum of compound **1**



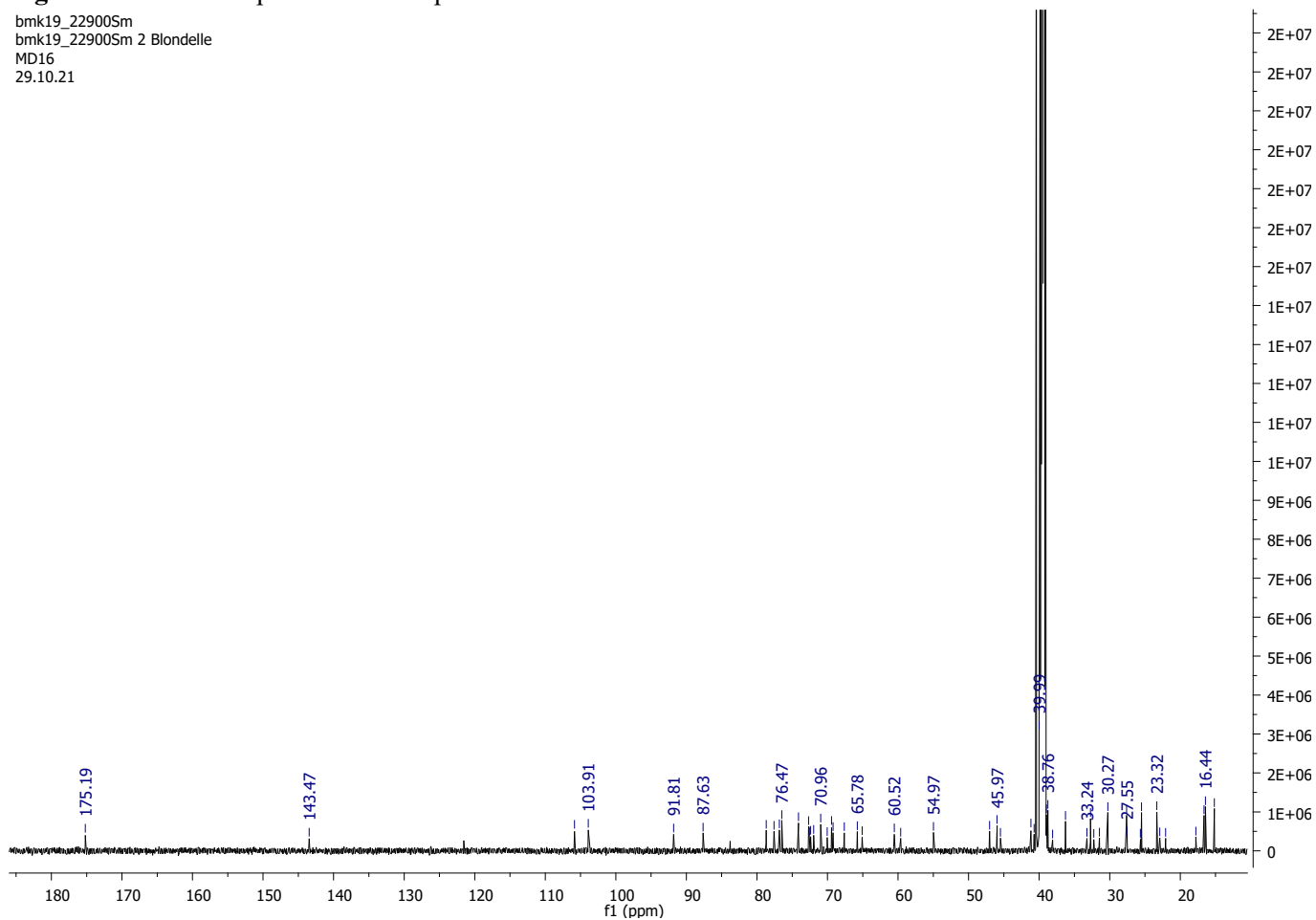
**Figure S1.** HR ESIMS spectrum of compound **1**

bmk19\_20077Sm  
bmk19\_20077Sm 1 1 Matio Kemkuignou  
MD16  
13.10.20



**Figure S2.** <sup>1</sup>H NMR spectrum of compound **1**

bmk19\_22900Sm  
bmk19\_22900Sm 2 Blondelle  
MD16  
29.10.21



**Figure S3.** <sup>13</sup>C NMR spectrum of compound **1**

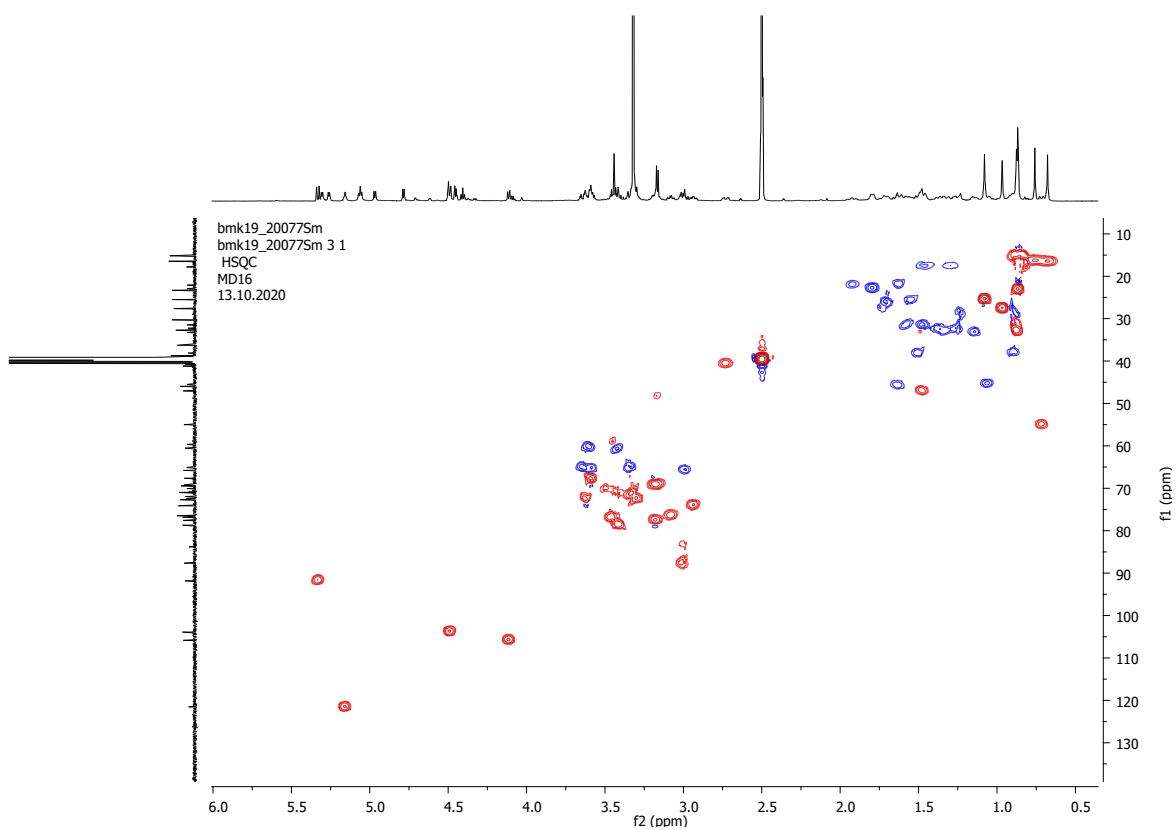


Figure S4. HSQC spectrum of compound 1

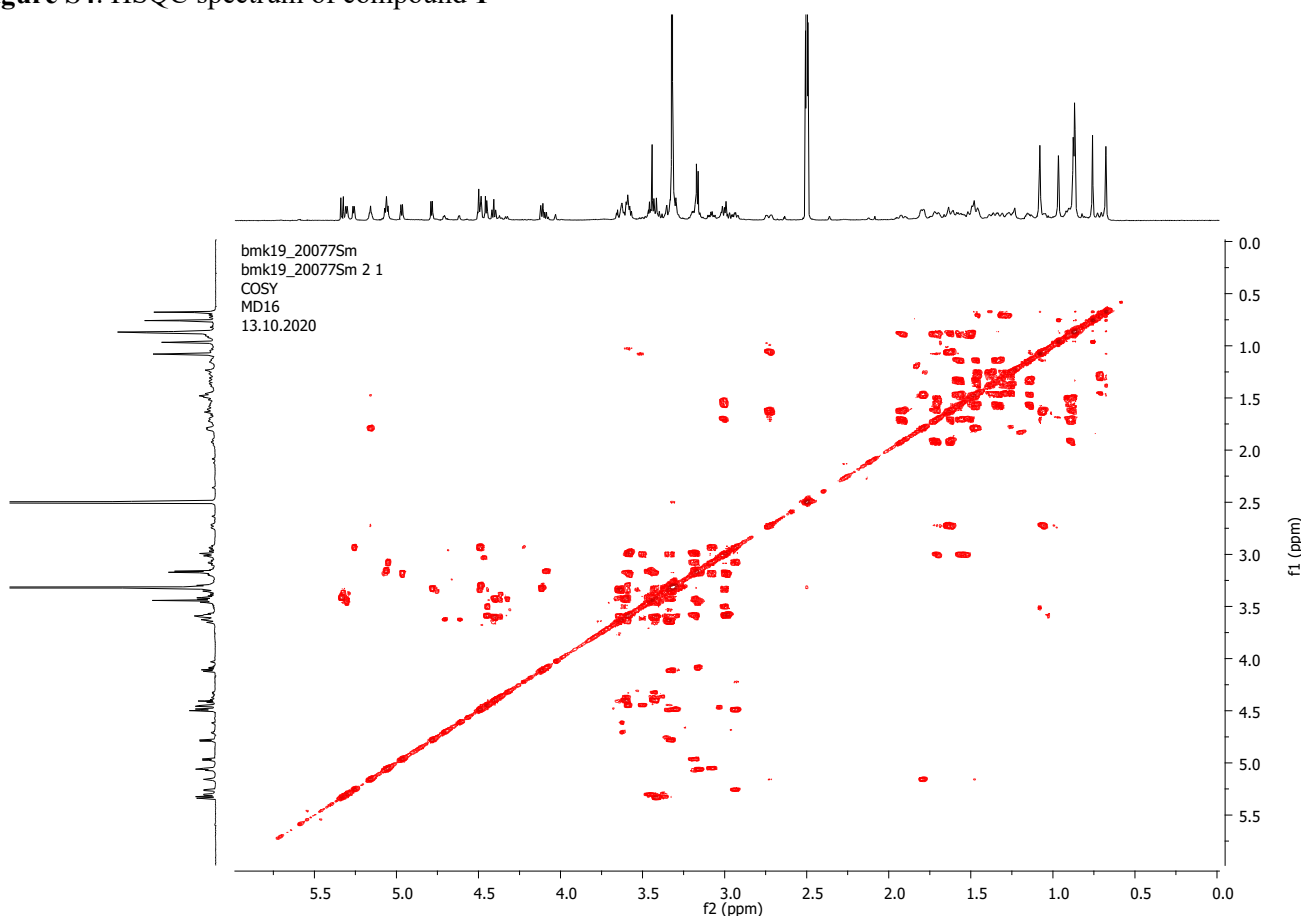


Figure S5.  $^1\text{H}$ ,  $^1\text{H}$  COSY spectrum of compound 1

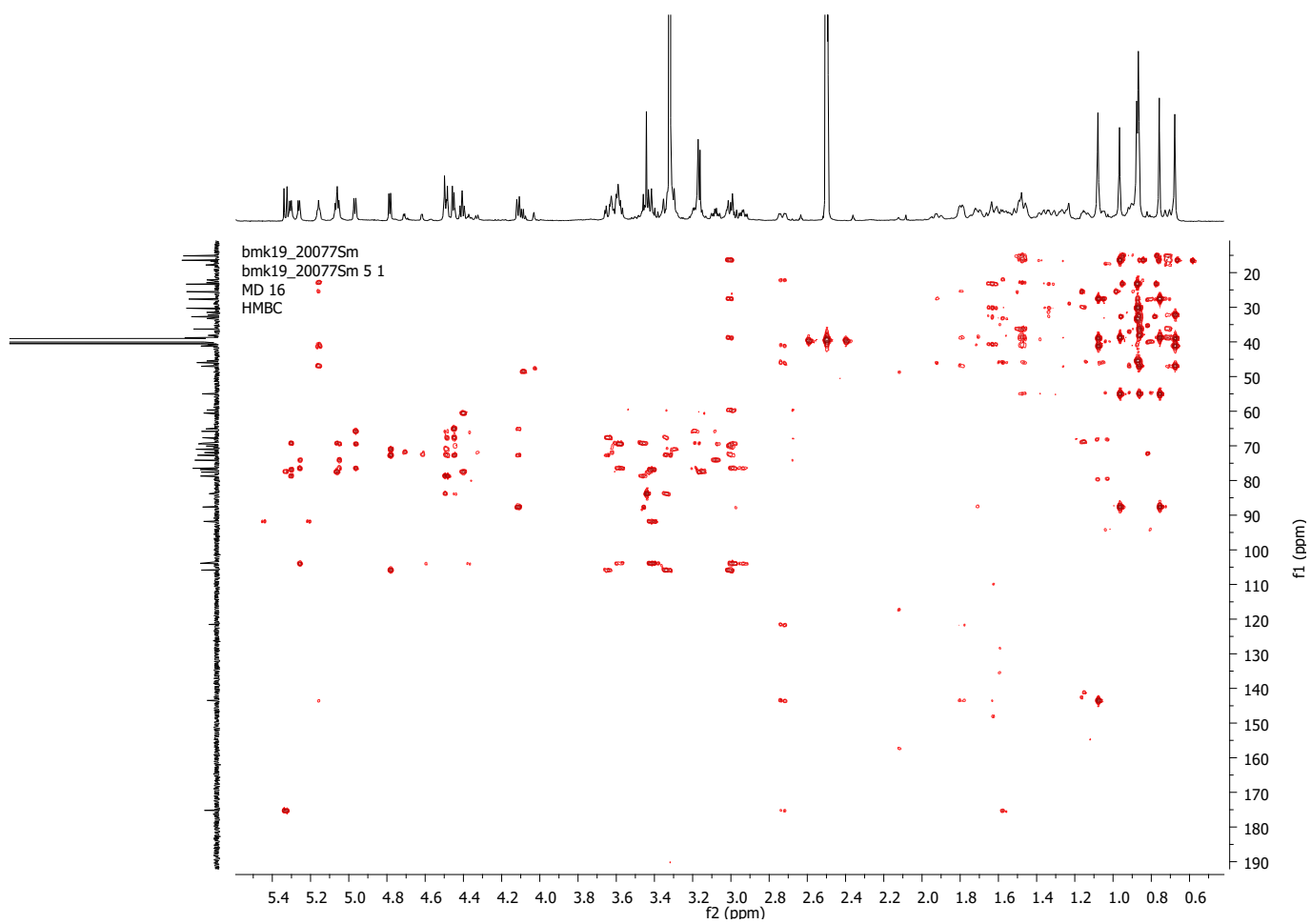


Figure S6. HMBC spectrum of compound 1