



# Corrigendum: Impact of Zinc and/or Herbal Mixture on Ruminant Fermentation, Microbiota, and Histopathology in Lambs

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## A Corrigendum on

### Impact of Zinc and/or Herbal Mixture on Ruminant Fermentation, Microbiota, and Histopathology in Lambs

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In the original article, there was a mistake in **Table 2** and **Table 3** as published. **In the columns under m/z [M-H]<sup>-</sup> in all expressions separating numbers from decimals, there should be dots (.) not a slash (/).** The corrected **Tables 2** and **3** appear below.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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**TABLE 2** | Concentrations of the main bioactive compounds in medicinal herbs (g/kg DM).

RT (min)	UV (nm)	<i>m/z</i> [M-H] <sup>-</sup>	MS <sup>2</sup>	MS <sup>2</sup> fragments	Formula	Compounds	Flavonoids	Phenolic acids
<b><i>Fumaria officinalis</i></b>								
7.00	250/326	295.046	179.0338		C <sub>13</sub> H <sub>12</sub> O <sub>8</sub>	Caffeoylmalic acid		1.212
7.80	227/315	163.0395	119.0499		C <sub>9</sub> H <sub>8</sub> O <sub>3</sub>	O-Coumaric acid		0.742
9.00	255/352	625.1398	301.0337		C <sub>27</sub> H <sub>30</sub> O <sub>17</sub>	Quercetin-O-Hex-Hex	2.384	
9.40	255/352	595.1287	301.0339		C <sub>26</sub> H <sub>28</sub> O <sub>16</sub>	Quercetin O-Pen-Hex	3.500	
9.90	252/351	609.1472	300.0279	285	C <sub>27</sub> H <sub>30</sub> O <sub>16</sub>	Isoquercitrin O-Dhex		0.934
10.20	255/354	463.0882	301.0337		C <sub>21</sub> H <sub>20</sub> O <sub>12</sub>	Quercetin O-Hex	1.706	
10.90	221/329	593.1520	285.0397		C <sub>27</sub> H <sub>30</sub> O <sub>15</sub>	Kaempferol-3-O-rutinoside	0.464	
11.50	255/365	639.1561	315.0504		C <sub>28</sub> H <sub>32</sub> O <sub>17</sub>	Isorhamnetin-O-Hex-Hex	0.558	
						Total contents:	12.211	3.961
<b><i>Malva sylvestris</i></b>								
7.00	523	757.1846	347.0761	329,261,509	C <sub>32</sub> H <sub>39</sub> O <sub>21</sub>	Delphinidin 5-glucoside 3-lathyroside	1.644	
7.90	308	163.0381	119.0502		C <sub>9</sub> H <sub>8</sub> O <sub>3</sub>	Coumarinic acid		0.468
10.00		609.1458	301.0330		C <sub>27</sub> H <sub>31</sub> O <sub>16</sub>	Quercetin-3-O-rutinoside	0.395	
10.20	268/343	447.0928	285.0386		C <sub>21</sub> H <sub>20</sub> O <sub>11</sub>	Kaempferol-O-Hex	0.494	
11.40	268/336	431.0978	269.0435		C <sub>21</sub> H <sub>20</sub> O <sub>10</sub>	Apigenin-O-Hex	1.560	
						Total contents:	6.479	0.654
<b><i>Artemisia absinthium</i></b>								
4.10	215/325	353.0877	191.0567	179,161,135	C <sub>16</sub> H <sub>18</sub> O <sub>9</sub>	Chlorogenic acid		3.416
11.00		515.1193	353.0867	191,179,135	C <sub>25</sub> H <sub>24</sub> O <sub>12</sub>	1,5-Dicaffeoylquinic acid		2.124
11.20		653.1719	345.0595	330,302	C <sub>29</sub> H <sub>34</sub> O <sub>17</sub>	Spinacetin 3-rutinoside	0.241	
11.70		515.1192	353.0869	173,179,191,155	C <sub>25</sub> H <sub>24</sub> O <sub>12</sub>	4,5-Dicaffeoylquinic acid		0.610
						Total contents:	0.349	6.482
<b><i>Matricaria chamomilla</i></b>								
4.30	215/300	353.0877	191.0567		C <sub>16</sub> H <sub>18</sub> O <sub>9</sub>	3-O-Caffeoylquinic acid		1.777
9.00	235/290/319	355.1029	193.049	149	C <sub>16</sub> H <sub>20</sub> O <sub>9</sub>	Methyl 4-O-beta-d-glucopyranosyl caffeate		3.202
9.70	255/354	463.0879	301.0337	151	C <sub>21</sub> H <sub>20</sub> O <sub>12</sub>	Quercetin O-Hex	0.199	
10.30	257	447.0920	285.0386		C <sub>21</sub> H <sub>20</sub> O <sub>11</sub>	Kaempferol O-Hex	1.363	
10.70	217/291/325	515.1189	353.0877	179,191	C <sub>25</sub> H <sub>24</sub> O <sub>12</sub>	3,5-Dicaffeoylquinic acid		0.824
11.00	217/291/325	515.1197	353.0869	191,179	C <sub>25</sub> H <sub>24</sub> O <sub>12</sub>	1,5-Dicaffeoylquinic acid		3.016
11.40	266/300	431.0976	269.0434		C <sub>21</sub> H <sub>20</sub> O <sub>10</sub>	Apigenin O-Hex	0.150	
11.70	215/290/325	515.119	353.0868	173,179,191	C <sub>25</sub> H <sub>24</sub> O <sub>12</sub>	4,5-Dicaffeoylquinic acid		0.851
14.40	218/268/339	473.1085	269.0427	406	C <sub>23</sub> H <sub>22</sub> O <sub>11</sub>	Apigenin -O-(Hex-Ac)	0.210	
						Total contents:	2.442	12.084

**TABLE 3** | Concentrations of the main alkaloids in *Fumaria officinalis* (g/kg DM).

RT (min)	UV (nm)	<i>m/z</i> [M-H] <sup>-</sup>	MS <sup>2</sup>	MS <sup>2</sup> fragments	Formula	Compounds	Alkaloids
7.70	272	354.1366	305.0811	279,233,323,336	C <sub>20</sub> H <sub>19</sub> NO <sub>5</sub>	Parfumine	0.884
8.40	280	328.1572	265.0865	237,297,313,178	C <sub>19</sub> H <sub>21</sub> NO <sub>4</sub>	Cularimine	0.102
8.50	288	370.1678	291.1029	263,352,337	C <sub>21</sub> H <sub>23</sub> NO <sub>5</sub>	Fumaricine	0.102
8.90	285	326.1410	311.1172	277,294,251,178	C <sub>19</sub> H <sub>19</sub> NO <sub>4</sub>	Cheilanthalifoline	0.231
9.20	286	354.1360	275.0713	336,247	C <sub>20</sub> H <sub>19</sub> NO <sub>5</sub>	Chelidonine	0.154
9.40	289	398.1621	338.1397	277,323,249	C <sub>22</sub> H <sub>23</sub> NO <sub>6</sub>	Not determined	0.530
10.20	289	354.1362	275.0692	247,293,206	C <sub>20</sub> H <sub>19</sub> NO <sub>5</sub>	Protopine	0.873
10.60	288	354.1727	206.1139	275,311,338,292	C <sub>21</sub> H <sub>23</sub> NO <sub>4</sub>	Protopine type	0.367
10.80	271	352.1193	279.0647	309,321,263,251	C <sub>20</sub> H <sub>17</sub> NO <sub>5</sub>	Fumariline	1.728
11.20	288	324.1230	249.0764	307,277,219,176	C <sub>19</sub> H <sub>17</sub> NO <sub>4</sub>	Stylopine	0.785
						Total contents:	6.015