

## Supporting Information

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### Determination of taxanes by validated LC-MS/MS method in hazelnut collected from different regions and altitudes in Turkey

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**Table 1.** Regions of hazelnut samples

<b>Sample Number</b>	<b>Region</b>	<b>Altitude (m)</b>
1	Düzce / Hacıaliler village	0-250
2	Düzce / Çilimli / Kırkharman village	250-500
3	Düzce / Cumayeri district	250-500
4	Düzce / Muncurlu village	500+
5	Düzce / Gölyaka / Muhappede village	500+
6	Adapazarı / Karasu / Aziziye / Karabaşdere village	0-250
7	Adapazarı / Kocaali / Kozluk village	0-250
8	Adapazarı / Kocaali / Melen village	0-250
9	Adapazarı / Karapürçek / Mecidiye / Gavurharmanı village	250-500
10	Adapazarı / Geyve district	500+
11	Trabzon / Arsin / Elmaalan / Bekarlı district	0-250
12	Trabzon / Yomra / Yenice / Alçak district	0-250
13	Trabzon / Vakfikebir / Hacıköy district	0-250
14	Trabzon / Arsin / Yeşilce / Kerimoğlu district	250-500
15	Trabzon / Yomra / Yenice / Cami district	250-500
16	Trabzon / Arsin / Elmaalan / Alsancak district	500+
17	Samsun / Terme / Sakarlı village	0-250
18	Samsun / Kirazlık / Çimenli village	250-500

**Table 2.** LC-MS/MS parameters of taxane compounds

<b>Compounds</b>	<b>Parent ion</b>	<b>Daughter ion</b>	<b>Collision Energy (V)</b>
Cephalomannine	832.40	264.00	15
Baccatin III	587.30	405.00	12
Paclitaxel	854.40	286.00	18
10-deacetylbaccatin III	545.30	327.30	14
Erithromycin *	734.50	576.30	20

\* Used as internal standard

**Table 3.** Data of calibration curve

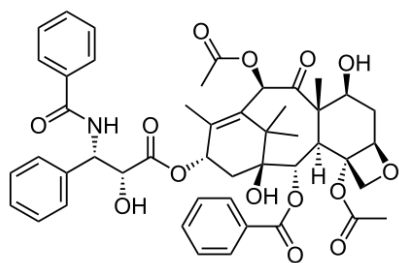
<b>Compounds</b>	<b>Linear regression equation</b>	<b>Working range (µg/kg)</b>	<b>R<sup>2</sup></b>
Cephalomannine	$y=0.00008x-0.0003$	10-1000	0.9977
Baccatin III	$y=0.00005x-0.0002$	10-1000	0.9999
Paclitaxel	$y=0.00003x-0.0019$	10-1000	0.9994
10-DAB III	$y=0.1460x-0.0002$	10-1000	0.9951

**Table 4.** Values of validation parameters and relative measurement uncertainty

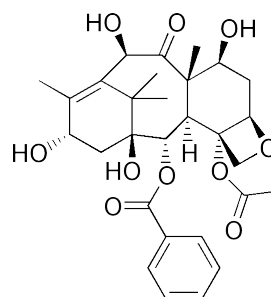
<b>Compounds</b>	<b>LOD (µg/kg)</b>	<b>LOQ (µg/kg)</b>	<b>RSD (%)</b>	<b>Recovery (%)</b>	<b>Relative Measurement Uncertainty (%)</b>
Cephalomannine	1.88	6.25	1.38	96.8	2.1
Baccatin III	0.94	3.13	1.98	98.8	2.6
Paclitaxel	1.67	5.56	0.39	97.8	7.6
10-DAB III	2.14	7.14	3.66	95.5	6.2

**Table 5.** Mass fraction ( $\mu\text{g}/\text{kg}$ )  $\pm$  expanded measurement uncertainty of Baccatin III in hazelnut shell and husk

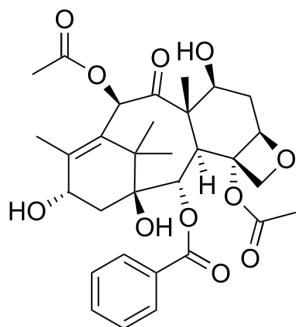
Sample	Baccatin III ( $\mu\text{g}/\text{kg} \pm$ expanded measurement uncertainty)	
	Nut shell	Husk
1	380.07 $\pm$ 9.96	570.71 $\pm$ 14.95
2	< LOD	233.01 $\pm$ 6.11
3	1020.85 $\pm$ 26.74	706.81 $\pm$ 18.52
4	223.33 $\pm$ 5.85	236.12 $\pm$ 6.19
5	620.90 $\pm$ 16.25	228.74 $\pm$ 5.99
6	< LOD	166.12 $\pm$ 4.35
7	513.95 $\pm$ 13.46	692.78 $\pm$ 18.15
8	322.94 $\pm$ 8.46	408.61 $\pm$ 10.71
9	193.38 $\pm$ 5.07	272.73 $\pm$ 7.14
10	283.29 $\pm$ 7.42	281.25 $\pm$ 7.37
11	235.51 $\pm$ 6.17	705.77 $\pm$ 18.49
12	205.39 $\pm$ 5.38	248.36 $\pm$ 6.51
13	910.81 $\pm$ 23.86	923.64 $\pm$ 24.21
14	164.38 $\pm$ 4.31	349.74 $\pm$ 9.16
15	285.67 $\pm$ 7.48	281.41 $\pm$ 7.37
16	< LOD	216.89 $\pm$ 5.68
17	410.52 $\pm$ 10.75	342.68 $\pm$ 8.98
18	< LOD	210.02 $\pm$ 5.51



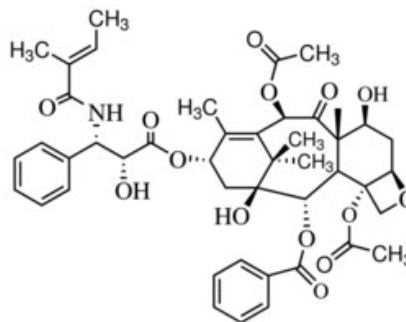
**1: Paclitaxel**



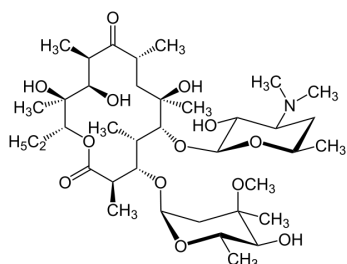
**2: 10-deacetylbaccatin III**



**3: Baccatin III**

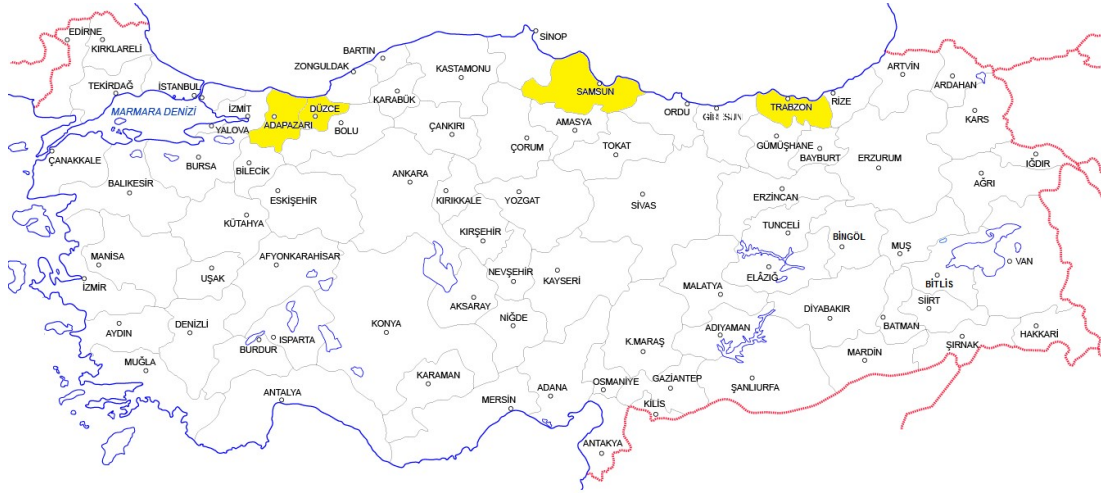


**4: Cephalomannine**



**5: Erythromycin**

**Figure 1.** Structure of common taxanes: (1)Paclitaxel, (2)10-deacetylbaccatin III, (3)Baccatin III, (4)Cephalomannine, (5)Erythromycin



**Figure 2.** Hazelnut sampling cities in Turkey



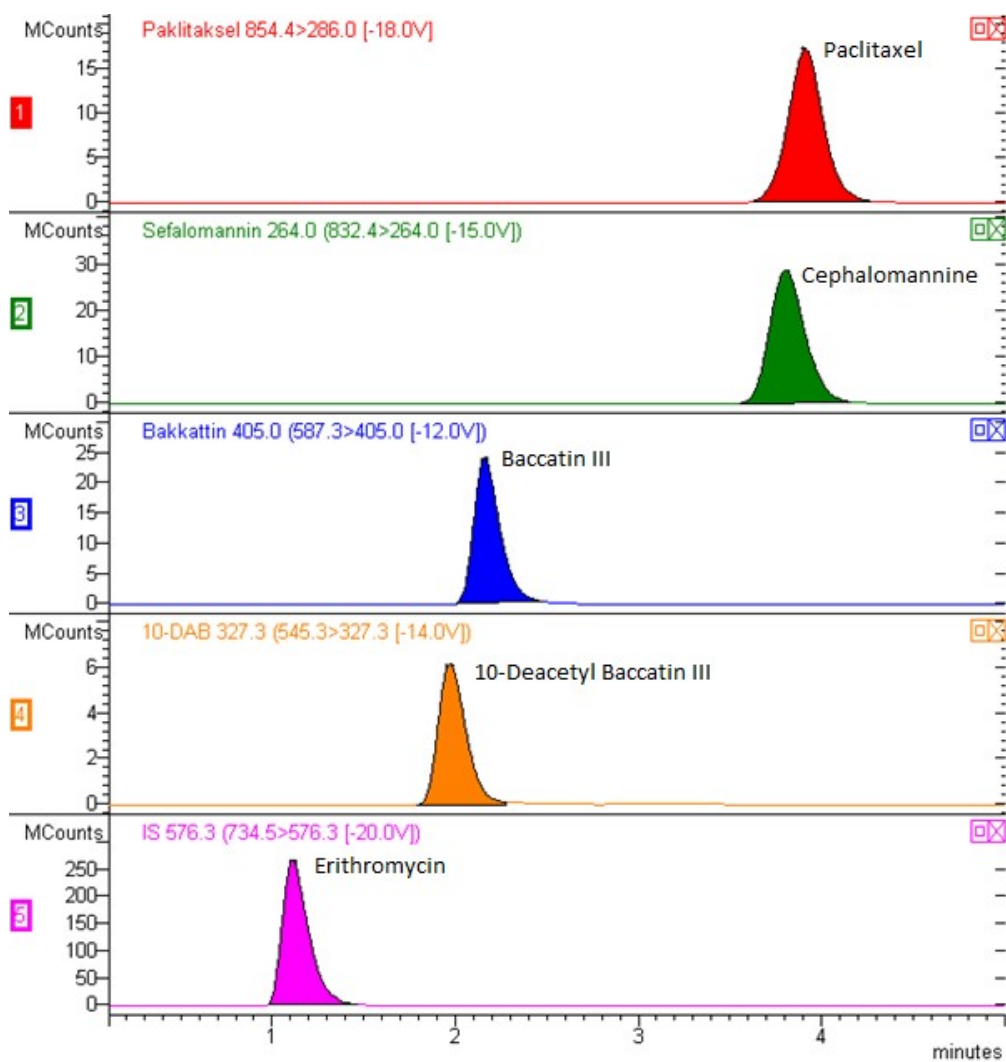
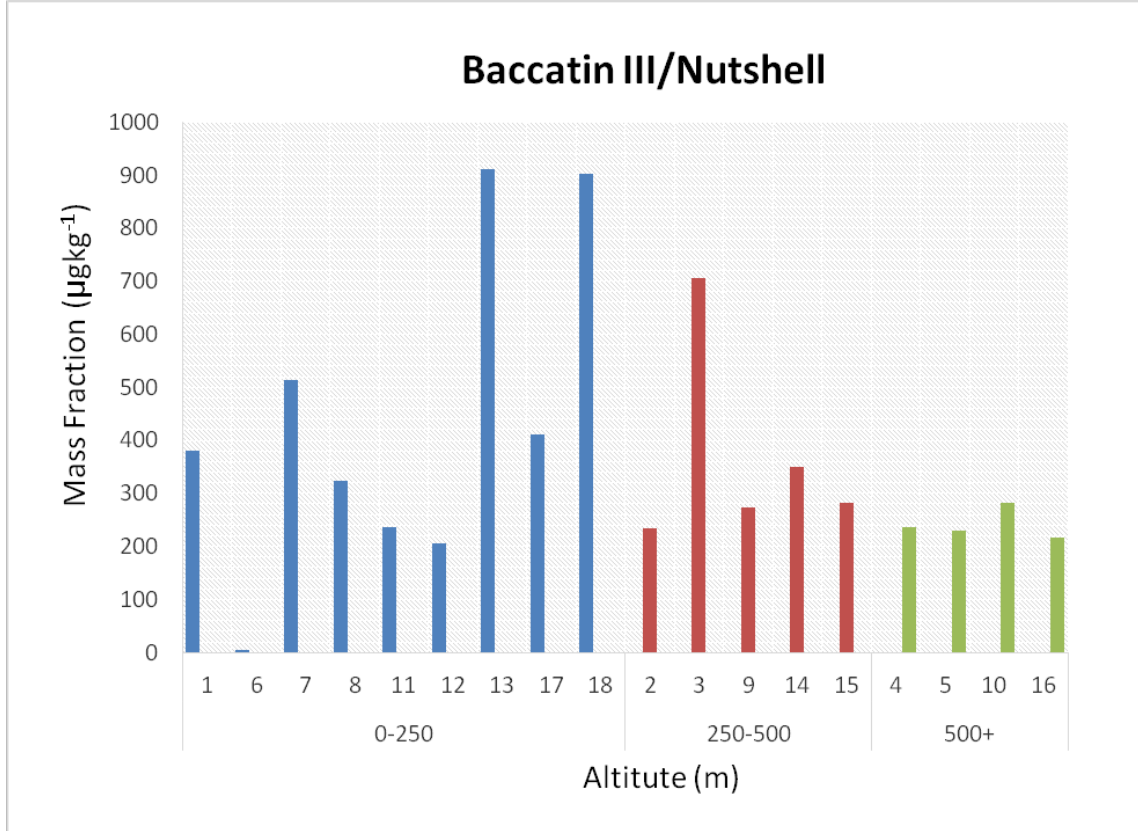
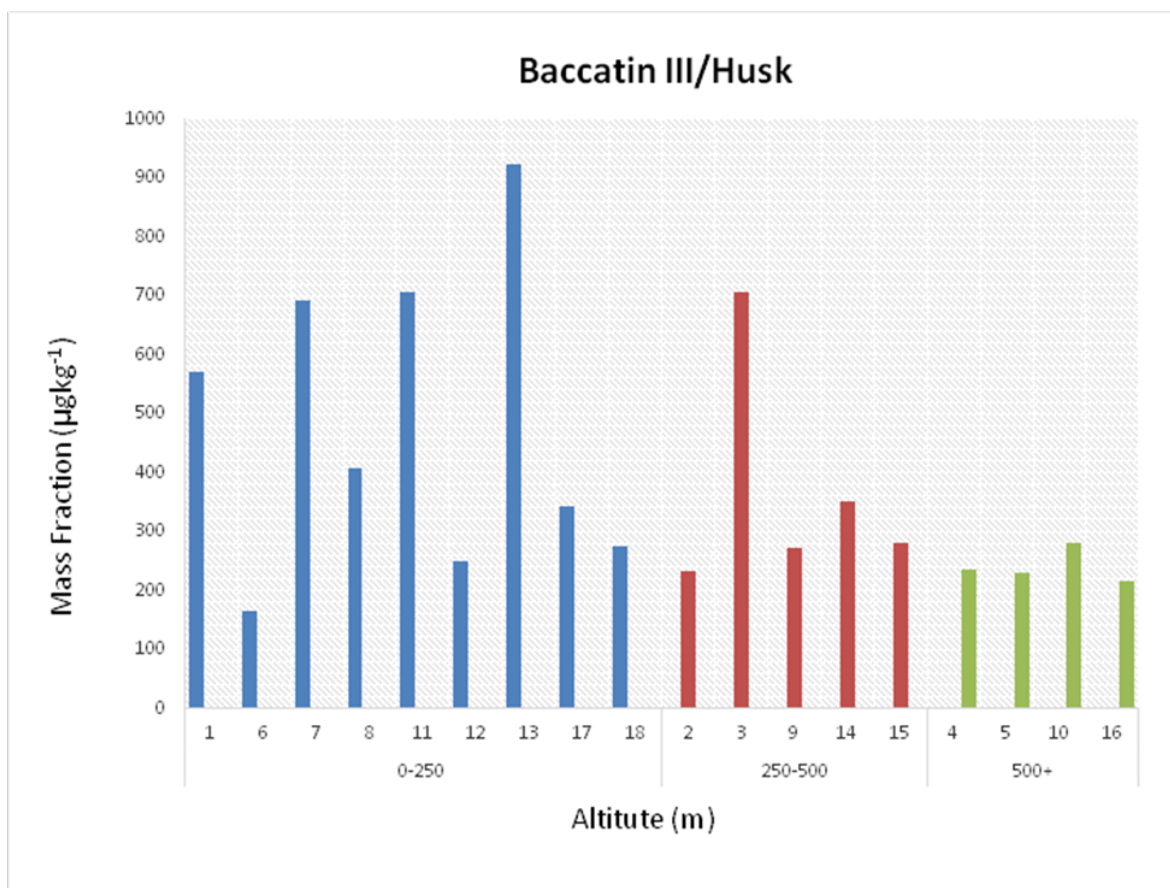


Figure 3. Chromatogram of taxanes measured by LC-MS/MS



**Figure 4.** Taxane content in nut shells.



**Figure 5.** Taxane content in nut husks.