



Phytochemical and agronomic characteristics of marketed varieties



Species	Varieties	Phytochemical profile essential oil ⁽²⁾	Essential oil/active compounds content ⁽²⁾	Characteristics
<i>Achillea collina</i>	Spak ⁽¹⁾	30–40% chamazulene	0.15–0.6 % EO depending on the organ harvested (leaves, inflorescences)	Productive variety in dry matter and rich in active compounds
<i>Alchemilla xantochlora</i>	Aper ⁽¹⁾		5–10% tannins and 1,5–2% flavonoids in above organs	Variety rich in tannins and flavonoids, resistant to powdery mildew, very uniform and very productive with very good perenniality
<i>Althea officinalis</i>			swelling index >10 (roots)	Root-producing variety rich in mucilages
<i>Arnica montana</i>	Arnimed ⁽¹⁾			Open-pollinated variety, vigorous, good flower productivity
<i>Artemisia annua</i>	Apollon ⁽¹⁾		1.3% artemisinin in leaves	Hybrid variety, productive and very rich in artemisinin, late flowering
<i>Artemisia umbelliformis</i>	RAC12 ⁽¹⁾	15–19% α -myrcene, 13–16% 1,8-cineol, 10–15% β -pinene, 7–16% borneol, 2–3% thujones (α + β)	1.5% EO in floral stalks	open-pollinated variety, homogeneous, erect, low in thujones, resistant to rust
<i>Hyssopus officinalis</i>	Perlay ⁽¹⁾	50% pinocamphone, 25% isopinocamphone, 10% β -pinene	1.2–1.3 % EO in leaves+flowers	Homogeneous, vigorous open-pollinated variety
<i>Malva sylvestris</i>				Productive variety, erect, rich in mucilage
<i>Marrubium vulgare</i>	Claudala ⁽¹⁾		4.0–4.5% tannins in above organs	Productive variety in dry matter, rich in tannins and cold tolerant
<i>Melissa officinalis</i>	Lorelei ⁽¹⁾	Early summer: 1% citronellal, 13% neral, 19% geraniolate Summer: 4% citronellal, 24% neral, 33% geraniol	0.03–0.3 % EO in leaves; 4.5–6.5 % rosmarinic acid in leaves	Synthetic variety, erect, very uniform, cold-tolerant, productive
<i>Origanum vulgare</i>	Carva ⁽¹⁾	75% carvacrol, 6% thymol, 5% p-cymene, 3% γ -terpinene	7.0–8.0 % EO in leaves+flowers	Hybrid variety, erect and vigorous, productive in essential oil and rich in carvacrol
<i>Peucedanum ostruthium</i>	Jessy ⁽¹⁾	Roots : 5–6% sabinene, 6–13% 4-terpineol Above organs: 14–17% sabinene, 0.2–0.5% 4-terpineol	Roots: 0.7% EO; 2% ostruthine Above organs: 0.2% EO; 0% ostruthine	Good productivity
<i>Pimpinella peregrina</i>	Licora ⁽¹⁾	17–48% esters of isobutyric acid, 15–25% 1,4-dimethylazulene, 6–21% geijerene, 7–25% β -		
<i>Plantago lanceolata</i>	Noflor ⁽¹⁾		0.6–2.0% acteoside; 0.7–4.0% iridoids in leaves	Very few flowers in 1st year
<i>Rhodiola rosea</i>	Mattmark ⁽¹⁾		rosavins/salidroside ratio : 0.65	Synthetic variety
<i>Salvia officinalis</i>	Extrakta	Spring : 23% thujones (α + β), 2–18% camphor, 8–15% 1,8-cineol End summer : 27–34% thujones (α + β), 15–20% camphor, 9–10% 1,8-cineol	1.6–1.7 % EO in leaves	open-pollinated variety, good productivity
<i>Salvia officinalis</i>	Carola ⁽¹⁾	Spring: 25–33% thujones (α + β), 2–13% camphor, 10–15% 1,8-cineol End summer: 30–40% thujones (α + β), 15–17% camphor, 7–8% 1,8-cineol	1.7–2.0 % EO in leaves	Synthetic variety, very homogeneous, good productivity in essential oil
<i>Thymus vulgaris</i>	Varico3 ⁽¹⁾	65–70% thymol, 3–4% carvacrol, 9–13% γ -terpinene	4.0–5.0 % EO in leaves+flowers (65% thymol)	Hybrid variety, very homogeneous, very good productivity in essential oil and rich in thymol
<i>Veronica officinalis</i>			1.3–2.5 % catalpol (iridoid glucoside)	

(1) Bred by Agroscope

(2) Phytochemistry :

- this information comes mainly from trials and may vary depending on the site and cropping practices (mainly harvest dates/stages).
- essential oil (EO) and other compound contents are expressed on dry plant material