Supplementary material

Anthelmintic Activity of Yeast Particle-Encapsulated Terpenes

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Figure S1. Chemical structure of terpenes.
**Table S1.** Octanol/water partition coefficient (log P), solubility in water, and HPLC retention time with isocratic method (acetonitrile:water 70:30) of terpenes evaluated for encapsulation in YPs.

| Terpene       | Log P | Solubility in Water | HPLC Retention Time (Min) |
|---------------|-------|---------------------|---------------------------|
| Cinnamic aldehyde | 1.9   | 1.42 mg/mL          | 2.63                      |
| Eugenol       | 2.27  | 1.44 mg/mL          | 2.73                      |
| E- carvone    | 2.71  | 1.31 mg/mL          | 3.35                      |
| Citral        | 2.76  | 0.59 mg/mL          | 3.87                      |
| Linalool      | 2.97  | 1.6 mg/mL           | 3.48                      |
| Alpha terpineol | 2.98  | 7.1 mg/mL           | 3.38                      |
| Thymol        | 3.3   | 0.9 mg/mL           | 3.42                      |
| Carvacrol     | 3.43  | 1.25 mg/mL          | 3.35                      |
| Geraniol      | 3.56  | 0.686 mg/mL         | 3.35                      |
| Citronellol   | 3.91  | 0.307 mg/mL         | 3.71, 4.32               |
| Anethole      | n/a   | 0.111 mg/mL         | 4.90                      |
| Linalool acetate | 3.93  | 8.2 μg/mL           | 6.61                      |
| Cymene        | 4.1   | 23.4 μg/mL          | 8.31                      |
| Limonene      | 4.57  | 7.57 μg/mL          | 8.1                       |
| Nerolidol     | 4.6   | 1.532 μg/mL         | 8.28                      |
| Alpha-pinene  | 4.83  | 2.49 μg/mL          | 18.47                     |
| Farnesol      | 5.7   | 1.7 μg/mL           | 10.6                      |
| Peppermint oil (menthol)* | 3.4   | 0.42 mg/mL         | 8.40, 8.87               |
| Tea tree oil (terpine-4-ol)* | 2.81  | 2.5 mg/mL         | 9.9–10.4                |
| Lavender oil* | Linalool | 2.97  | 1.6 mg/mL           | 3.48                      |
|              | Linalyl acetate | 3.93  | 8.2 μg/mL           | 6.61                      |

*These oils are complex mixtures, for example, lavender oil contains over 100 terpenes. The properties of the primary terpenes found in these oils are shown.

**Table S2.** Terpene loading of selected YP-terpene samples.

| Terpene       | HPLC Retention Time (Min) | HPLC Limit of Detection (μg/mL) | % YP-Encapsulated Terpene |
|---------------|---------------------------|--------------------------------|---------------------------|
| Carvacrol     | 3.35                      | 8                              | 98.5 ± 2.5                |
| E- carvone    | 3.35                      | 8                              | 99.7 ± 0.1                |
| Citral        | 3.35                      | 4                              | 99.8 ± 0.1                |
| Cymene        | 8.31                      | 8                              | 99.8 ± 0.2                |
| Linalyl acetate | 6.61                      | 8                              | 100.0 ± 0.1               |
| Nerolidol     | 8.28                      | 8                              | 100.0 ± 0.5               |