antibiotics

MDPI

*Supplementary Materials*

# Untargeted Metabolomics for Unraveling the Metabolic Changes in Planktonic and Sessile Cells of *Salmonella* Enteritidis ATCC 13076 after Treatment with *Lippia origanoides* Essential Oil

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***Table S1.*** Major constituents in the EOs studied. The relative amount of each compound is reported as a percentage (%).

| Code | Plant species | Voucher | Major compounds (>1%) |
|---|---|---|---|
| SA | *Steiractinia aspera* Cuatrec. | UIS Herbarium 20891 | α-Pinene (24.9%), β-pinene (14.8%), germacrene D (13.1%), β-phellandrene (10.1%), α-phellandrene (6.3%), sabinene (4.6%), *p*-cymene (4.5%), *trans*-β-caryophyllene (3.1%); α-copaene (2.6%), and limonene (2.4%). |
| TD-I | *Turnera diffusa* Willd | UIS Herbarium 22037 | Dehydrofukinone (25.4%), aristolochene (17.9%), valencene (7.4%), β-selinene (5.2%), *trans*-β-caryophyllene (4.0%), β-elemene (4.0%), premnaspirodiene (3.7%), guaiol (3.5%), germacra-4,5,10-trien-1-α-ol (3.5%), and caryophyllene oxide (3.3%). |
| LOP | *Lippia origanoides* H.B.K Phellandrene chemotype | COL 560259 | *trans*-β-Caryophyllene (18.6%), α-humulene (10.1%), α-phellandrene (9.3%), *p*-cymene (8.7%), 1,8-cineole (6.5%), limonene (4.4%), caryophyllene oxide (3.8%), β-phellandrene (3.1%), camphene (2.5%), and germacrene D (2.2%). |
| CM-I | *Calycolpus moritzianus* Burret | UIS Herbarium 21982 | 1,8-Cineole (19.1%), limonene (17.6%), *trans*-β-caryophyllene (6.3%), viridiflorol (5.7%), α-pinene (5.1%), *trans*-geranyl linalool (4.0%), *trans*-nerolidol (3.5%), α-copaene (3.2%), selina-3,7(11)-diene (2.8%), and viridiflorine (2.7%). |
| PA | *Piper aduncum* L. | COL 587136 | Piperitone (14.8%), *trans*-β-caryophyllene (7.4%), viridiflorol (6.5%), limonene (6.0%), δ-cadinene (5.5%), α-pinene (4.6%), α-phellandrene (4.4%), caryophyllene oxide (3.8%), 1,8-cineole (3.6%), and *p*-cymene (3.0%). |
| EQ | *Elaphandra quinquenervis* H.Rob | COL 587094 | Germacrene D (20.7%), α-phellandrene (9.1%), α-pinene (6.8%), *trans*-β-caryophyllene (5.1%), $\Delta^3$-carene (4.9%), limonene (4.5%), β-cubebene (3.5%), α-humulene (2.6%), premnaspirodiene (2.6%), and δ-cadinene (2.6%). |
| HD | *Hyptis dilatata* Benth | COL 582530 | *trans*-β-Caryophyllene (20.2%), camphor (16.1%), Δ3-carene (15.5%), α-pinene (10.5%), palustrol (8.7%), α-gurjunene (4.7%), |

| Code | Plant species | Voucher | Major compounds (>1%) |
|---|---|---|---|
| | | | ledol (3.4%), limonene (2.4%), camphene (1.7%), viridiflorine (1.5%), and aromadendrene (1.5%). |
| LOC | *L. origanoides* H.B.K Carvacrol chemotype | UIS Herbarium 22034 | Carvacrol (35%), *p*-cymene (14.4%), thymol (8.0%), γ-terpinene (5.3%), *trans*-β-caryophyllene (4.4%), β-myrcene (2.4%), carvacryl acetate (2.0%), methyl thymyl ether (1.9%), and α-terpinene (1.7%). |
| LOCpT | *L. origanoides* H.B.K β-Caryophyllene-thymol chemotype | UIS Herbarium 22035 | *trans*-β-Caryophyllene (15.1%), thymol (14%), 1,8-cineole (13%), *p*-cymene (12.6%), α-humulene (8.1%), α-phellandrene (7.1%), α-eudesmol (2.6%), caryophyllene oxide (2.5%), γ-terpinene (2.4%), and limonene (2.1%). |
| LOT-I | *L. origanoides* H.B.K Thymol chemotype | COL 587107 | Thymol (75.3%), *trans*-β-caryophyllene (5.4%), carvacrol (4.9%), α-humulene (3.2%), *p*-cymene (2.3%), thymyl acetate (1.6%), methyl thymyl ether (1.3%), caryophyllene oxide (1.3%), and *trans*-β-bergamotene (1.0%). |
| TD-II | *T. diffusa* Willd | UIS Herbarium 22032 | Aristolechene (20.9%), dehydrofukinone (19.3%), valencene (6.5%), β-selinene (5.8%), β-elemene (5.0%), *trans*-β-caryophyllene (4.9%), premnaspirodiene (4.7%), *p*-cymene (3.6%), germacra-4,5,10-trien-1-α-ol (3.6%), and guaiol (3.3%). |
| SV | *Satureja viminea* (L.) Kuntze | COL 566449 | *p*-Menth-3-en-8-ol (32.4%), pulegone (16.1%), *trans*-9-*epi*-caryophyllene (8.9%), *trans*-β-caryophyllene (8.4%), caryophyllene oxide (4.3%), spathulenol (3.6%), benzyl benzoate (2.4%), δ-cadinene (2.2%), *trans*-pulegol (1.8%), and *p*-mentha-3,8-diene (1.5%). |
| PS | *Psidium sartorianum* (O.Berg) Nied | COL 578359 | *trans*-β-Caryophyllene (12.7%), caryophyllene oxide (12.0%), dehydrofukinone (7.5%), caryophylla-4(12),8(13)-dien-5-β-ol (4.8%), germacrene B (4.1%), 1,8-cineole (3.7%), *p*-cymene (2.9%), β-pinene (2.7%), selina-3,7(11)-diene (2.5%), β-selinene (2.1%), and premnaspirodiene (2.0%). |
| VC | *Varronia curassavica* Jacq. | COL 559446 | *trans*-β-Caryophyllene (19.2%), germacrene D (12.3%), *trans*-β-guaiene (11.8%), α-pinene (9.4%), α-copaene (7.0%), β-pinene (4.1%), bicyclogermacrene (3.9%), β-elemene (2.8%), δ-cadinene (2.8%), and α-humulene (2.7%). |
| OB | *Ocimum basilicum* L. | UIS Herbarium 22227 | Linalool (42.7%), estragole (18.6%), 1,8-cineole (8.1%), germacrene D (4.9%), *epi*-α-cadinol (4.2%), γ-cadinene (3.7%), α-humulene (2.5%), β-elemene (2.2%), bicyclogermacrene (2.2%), and *trans*-α-bergamotene (1.1%). |
| CM-II | *C. moritzianus* Burret | UIS Herbarium 21982 | 1,8-Cineole (15.4%), limonene (14.7%), viridiflorol (7.1%), *trans*-geranyllinalool (6.7%), *trans*-β-caryophyllene (6.2%), β-selinene (5.8%), *trans*-nerolidol (4.0%), α-pinene (3.5%), selina-3,7(11)-diene (3.0%), and α-copaene (3.0%). |
| TD-III | *T. diffusa* Willd | Herbarium UIS 22037 | Aristolochene (20.6%), dehydrofukinone (17.3%), *p*-cymene (5.8%), β-selinene (5.6%), valencene (5.2%), premnaspirodiene (4.2%), caryophyllene oxide (3.6%), *trans*-β-caryophyllene (2.8%), germacra-4,5,10-trien-1α-ol (2.4%). |
| LOTC | *L. origanoides* H.B.K Thymol- *p*-cymene chemotype | Herbarium UIS 22039 | Thymol (49.4%), *p*-cymene (19.1%), γ-terpinene (9.2%), β-myrcene (5.2%), α-terpinene (2.9%), carvacrol (2.7%), methyl thymyl ether (1.8%), *trans*-β-caryophyllene (1.6%), *cis*-β-ocimene (1.2%), and limonene (0.9%). |
| LOT-II | *L. origanoides* H.B.K Thymol chemotype | Herbarium UIS 22036 | Thymol (71.7%), *p*-cymene (10.5%), carvacrol (4.4%), β-myrcene (2.1%), γ-terpinene (2.0%), caryophyllene oxide (1.6%), methyl |

| Code | Plant species | Voucher | Major compounds (>1%) |
|---|---|---|---|
| | | | thymyl ether (0.9%), *trans*-β-caryophyllene (0.9%), humulene epoxide II (0.7%), and terpinen-4-ol (0.7%). |
| LM | *L. micromera* Schauer | COL 560986 | *p*-Cymene (26.8%), methyl thymyl ether (26.3%), thymol (17.8%), thymyl acetate (5.7%), γ-terpinene (5.4%), 1,8-cineole (5.1%), α-terpinene (2.0%), β-myrcene (2.0%), *trans*-β-caryophyllene (1.7%), α-thujene (1.3%), and caryophyllene oxide (0.9%). |

***Table S2.*** Putatively identified metabolites altered by the effect of *L. origanoides* LOT-II EO in planktonic cells of *S*. Enteritidis.

| Metabolite | Formula | Adduct | *m/z* | Δppm | RT | Modulated | Ionization mode |
|---|---|---|---|---|---|---|---|
| Glutathione disulfide | $C_{20}H_{32}N_6O_{12}S_2$ | $[M-H]^-$ | 611.1434477 | 1.11 | 1.08 | DOWN | ESI(−) |
| Glutathione | $C_{10}H_{17}N_3O_6S$ | $[M-H]^-$ | 306.076014 | 0.11 | 1.16 | DOWN | ESI(−) |
| Cytidine | $C_9H_{13}N_3O_5$ | $[M-H]^-$ | 242.0775838 | 0.43 | 0.85 | UP | ESI(−) |
| 2'-Deoxyuridine | $C_9H_{12}N_2O_5$ | $[M-H]^-$ | 227.0665 | 1.27 | 2.04 | DOWN | ESI(−) |
| 2,5-Dioxopentanoate | $C_5H_6O_4$ | $[M-H]^-$ | 129.0181634 | 4.77 | 0.49 | UP | ESI(−) |
| Gly Asp Val | $C_{11}H_{19}N_3O_6$ | $[M-H]^-$ | 288.1196335 | 0.25 | 0.96 | DOWN | ESI(−) |
| 2',3'-Cyclic AMP | $C_{10}H_{12}N_5O_6P$ | $[M-H]^-$ | 328.0447135 | 0.07 | 2.00 | UP | ESI(−) |
| Thymidine | $C_{10}H_{14}N_2O_5$ | $[M-H]^-$ | 241.0823454 | 0.39 | 2.78 | DOWN | ESI(−) |
| Pantoate | $C_6H_{12}O_4$ | $[(M-H)-H_2O]^-$ | 129.0545647 | 4.61 | 3.06 | DOWN | ESI(−) |
| Malic acid | $C_4H_6O_5$ | $[(M-H)-H_2O]^-$ | 115.0024718 | 5.72 | 0.49 | DOWN | ESI(−) |
| Serylcysteine | $C_6H_{12}N_2O_4S$ | $[(M-H)-H_2O]^-$ | 189.0329752 | 2.14 | 0.53 | UP | ESI(−) |
| Cys Thr Cys | $C_{10}H_{19}N_3O_5S_2$ | $[(M-H)-H_2O]^-$ | 306.0573702 | 2.77 | 1.16 | DOWN | ESI(−) |
| Uridine | $C_9H_{12}N_2O_6$ | $[M-H]^-$ | 243.0616018 | 0.44 | 1.36 | DOWN | ESI(−) |
| O-Succinyl-homoserine | $C_8H_{13}NO_6$ | $[(M-H)-H_2O]^-$ | 200.055546 | 1.71 | 1.16 | DOWN | ESI(−) |
| Gln-Pro | $C_{10}H_{17}N_3O_4$ | $[M-H]^-$ | 242.1139328 | 0.60 | 0.93 | UP | ESI(−) |
| 2-oxoglutaramate | $C_5H_7NO_4$ | $[2M-H]^-$ | 289.0672693 | 0.30 | 1.36 | DOWN | ESI(−) |
| Pro Gly Gln | $C_{12}H_{20}N_4O_5$ | $[M-H]^-$ | 299.1355365 | 0.01 | 0.53 | DOWN | ESI(−) |
| 3'-Keto-3'-deoxy-AMP | $C_{10}H_{11}N_5O_7P$ | $[M-H]^-$ | 344.0394785 | 0.35 | 1.80 | UP | ESI(−) |
| 3-Hydroxy-2-methylpyridine-5-carboxylate | $C_7H_7NO_3$ | $[M-H]^-$ | 152.0341913 | 3.74 | 1.40 | DOWN | ESI(−) |
| Adenine | $C_5H_5N_5$ | $[M-H]^-$ | 134.0460744 | 444 | 0.81 | DOWN | ESI(−) |
| Formiminoglutamic acid | $C_6H_{10}N_2O_4$ | $[(M-H)-H_2O]^-$ | 155.045069 | 3.81 | 0.73 | UP | ESI(−) |
| Asn Leu Asp | $C_{14}H_{24}N_4O_7$ | $[M-H]^-$ | 359.1566792 | 0.02 | 2.87 | DOWN | ESI(−) |
| Methionine | $C_5H_{11}NO_2S$ | $[M-H]^-$ | 148.0425725 | 4.37 | 0.69 | DOWN | ESI(−) |
| N-(3-Oxohexanoyl)homoserine lactone | $C_{11}H_{17}NO_3S$ | $[M-H]^-$ | 242.0856159 | 2.21 | 2.08 | DOWN | ESI(−) |
| Asp Lys Pro | $C_{15}H_{26}N_4O_6$ | $[M-H]^-$ | 357.1774182 | 0.05 | 3.07 | DOWN | ESI(−) |
| Leu His Val | $C_{21}H_{33}N_3O_4$ | $[(M+Na)-2H]^-$ | 412.2194875 | 4.20 | 3.55 | UP | ESI(−) |
| 2-Hydroxyethanesulfonate | $C_2H_6O_4S$ | $[M-H]^-$ | 124.9902573 | 4.74 | 0.51 | DOWN | ESI(−) |
| Threonate | $C_4H_8O_5$ | $[M-H]^-$ | 135.0287462 | 4.39 | 0.65 | DOWN | ESI(−) |
| Erythronic acid | $C_4H_8O_5$ | $[(M-H)-H_2O]^-$ | 117.0181309 | 5.54 | 1.08 | DOWN | ESI(−) |
| 3-Phosphoadenylylselenate | $C_{10}H_{15}N_5O_{13}P_2Se$ | $[M-3H]^-$ | 183.9692942 | 1.23 | 0.85 | UP | ESI(−) |
| Glutamylglycine | $C_7H_{12}N_2O_5$ | $[(M-H)-H_2O]^-$ | 185.0557955 | 2.34 | 0.77 | DOWN | ESI(−) |

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|---|---|---|---|---|---|---|---|
| Val-Asn | $C_9H_{17}N_3O_4$ | $[M-H]^-$ | 230.1139313 | 0.64 | 1.36 | DOWN | ESI(−) |
| 2-(2-Carboxy-4-methylthiazol-5-yl)ethyl phosphate | $C_7H_{10}NO_6PS$ | $[M-H]^-$ | 265.9883458 | 1.74 | 1.11 | DOWN | ESI(−) |
| Asn Leu Asp | $C_{14}H_{24}N_4O_7$ | $[(M-H)-H_2O]^-$ | 341.1460239 | 0.22 | 0.53 | DOWN | ESI(−) |
| Leucinic acid | $C_6H_{12}O_3$ | $[M-H]^-$ | 131.0702067 | 4.60 | 4.3 | DOWN | ESI(−) |
| Inosine | $C_{10}H_{12}N_4O_5$ | $[M-H]^-$ | 267.0729551 | 0.05 | 2.35 | DOWN | ESI(−) |
| Guanosine | $C_{10}H_{13}N_5O_5$ | $[M-H]^-$ | 282.0838703 | 0.10 | 2.40 | DOWN | ESI(−) |
| gamma-Glutamylvaline | $C_{10}H_{18}N_2O_5$ | $[M-H]^-$ | 245.1135962 | 0.58 | 1.32 | DOWN | ESI(−) |
| Glutaminylleucine | $C_{11}H_{21}N_3O_4$ | $[M-H]^-$ | 258.1454303 | 0.19 | 2.87 | UP | ESI(−) |
| 5-Ureido-4-imidazole carboxylate | $C_5H_6N_4O_3$ | $[(M-H)-H_2O]^-$ | 151.0249536 | 4.28 | 1.12 | UP | ESI(−) |
| Hydroxypropanedioic acid | $C_3H_4O_5$ | $[M-H]^-$ | 118.9974038 | 5.34 | 1.76 | DOWN | ESI(−) |
| 3,4-Dihydroxymandelic acid | $C_8H_8O_5$ | $[(M-H)-H_2O]^-$ | 165.0182595 | 3.15 | 3.53 | DOWN | ESI(−) |
| Phenylalanine | $C_9H_{11}NO_2$ | $[M-H]^-$ | 164.0706391 | 3.11 | 2.44 | DOWN | ESI(−) |
| 5-Hydroxyisourate | $C_5H_4N_4O_4$ | $[(M-H)-H_2O]^-$ | 165.0043526 | 3.07 | 0.88 | UP | ESI(−) |
| Thr Gly Pro | $C_{11}H_{19}N_3O_5$ | $[(M+H)-H_2O]^+$ | 256.1287395 | 3.86 | 0.50 | UP | ESI (+) |
| N1-Acetylspermidine | $C_9H_{21}N_3O$ | $[M+H]^+$ | 188.1756703 | 3.24 | 0.47 | UP | ESI (+) |
| 12-amino-dodecanoic acid | $C_{12}H_{25}NO_2$ | $[(M+H)-H_2O]^+$ | 198.1851465 | 3.19 | 5.55 | DOWN | ESI (+) |
| N-Acetylputrescine | $C_6H_{14}N_2O$ | $[M+H]^+$ | 131.1180264 | 3.07 | 0.51 | UP | ESI (+) |
| Biotin | $C_{10}H_{16}N_2O_3S$ | $[M+H]^+$ | 245.0958319 | 0.60 | 0.82 | UP | ESI (+) |
| Cytosine | $C_4H_5N_3O$ | $[M+H]^+$ | 112.0508077 | 2.43 | 0.51 | UP | ESI (+) |
| Isoleucine | $C_6H_{13}NO_2$ | $[(M+H)-H_2O]^+$ | 114.0915482 | 2.90 | 0.51 | UP | ESI (+) |
| Glutathione | $C_{10}H_{17}N_3O_6S$ | $[M+H]^+$ | 308.090624 | 3.26 | 0.54 | DOWN | ESI (+) |
| 2-Phenylpropanal | $C_9H_{10}O$ | $[2M+Na]^+$ | 291.1376434 | 5.33 | 0.96 | DOWN | ESI (+) |
| 2-Hydroxy-2-ethylsuccinic acid | $C_6H_{10}O_5$ | $[M+H]^+$ | 163.0613814 | 4.54 | 1.17 | UP | ESI (+) |
| 12-amino-dodecanoic acid | $C_{12}H_{25}NO_2$ | $[M+H]^+$ | 216.1957101 | 2.95 | 5.56 | DOWN | ESI (+) |
| Ribose | $C_5H_{10}O_5$ | $[(M+H)- H_2O]^+$ | 133.0495374 | 4.07 | 0.51 | UP | ESI (+) |
| Pantothenate | $C_9H_{17}NO_5$ | $[M+H]^+$ | 220.1178505 | 2.90 | 2.94 | DOWN | ESI (+) |
| 1-palmitoylglycerophosphocholine | $C_{24}H_{51}NO_7P$ | $[M+2Na]^+$ | 271.1590589 | 3.19 | 0.54 | DOWN | ESI (+) |
| N6,N6,N6-Trimethyl-lysine | $C_9H_{20}N_2O_2$ | $[(M+H)-H_2O]^+$ | 171.1491314 | 3.49 | 0.47 | UP | ESI (+) |
| Histidinyl-Hydroxyproline | $C_{11}H_{16}N_4O_4$ | $[M+H]^+$ | 269.1240566 | 3.43 | 0.78 | UP | ESI (+) |
| Citric acid | $C_6H_8O_7$ | $[(M+H)-H_2O]^+$ | 175.0235655 | 3.96 | 0.77 | UP | ESI (+) |
| Cytidine | $C_9H_{13}N_3O_5$ | $[M+H]^+$ | 244.092565 | 3.17 | 0.82 | UP | ESI (+) |
| Glutaminylglutamine | $C_{10}H_{18}N_4O_5$ | $[M+H]^+$ | 275.1346363 | 3.28 | 1.05 | UP | ESI (+) |
| Glycerol | $C_3H_8O_3$ | $[M+Na]^+$ | 115.0369811 | 1.12 | 0.86 | UP | ESI (+) |
| Acetyl tributyl citrate | $C_{20}H_{34}O_8$ | $[M+H]^+$ | 403.2320393 | 2.85 | 8.64 | UP | ESI (+) |
| Arbutin | $C_{12}H_{16}O_7$ | $[M+H]^+$ | 273.0965514 | 3.18 | 8.63 | UP | ESI (+) |
| N-Acetylcadaverine | $C_7H_{16}N_2O$ | $[M+H]^+$ | 145.1335297 | 3.79 | 0.88 | UP | ESI (+) |
| N-Cyclohexylformamide | $C_7H_{13}NO$ | $[M+H]^+$ | 128.1070842 | 3.47 | 6.19 | UP | ESI (+) |
| 5-Hydroxykynurenine | $C_{10}H_{12}N_2O_4$ | $[M+2H]^+$ | 113.0477629 | 0.77 | 0.82 | UP | ESI (+) |
| Arg Val Ser | $C_{14}H_{28}N_6O_5$ | $[M+H]^+$ | 361.2215333 | 4.41 | 8.64 | UP | ESI (+) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4-Dimethylamino-phenyl-alanine | $C_{11}H_{16}N_2O_2$ | $[M+H]^+$ | 209.1282274 | 3.69 | 0.51 | DOWN | ESI (+) |
| Benzylsuccinic acid | $C_{11}H_{12}O_4$ | $[M+H]^+$ | 209.0807856 | 2.84 | 6.70 | DOWN | ESI (+) |
| 1-(beta-Ribofuranosyl)-1,4-dihydronicotinamide | $C_{11}H_{16}N_2O_5$ | $[M+H]^+$ | 257.1127145 | 3.98 | 2.32 | DOWN | ESI (+) |
| Ser Arg Tyr | $C_{18}H_{28}N_6O_6$ | $[M+H]^+$ | 425.2138845 | 2.27 | 8.64 | UP | ESI (+) |
| Oxoglutaric acid | $C_5H_6O_5$ | $[(M+H)-H_2O]^+$ | 129.0183033 | 3.69 | 8.65 | UP | ESI (+) |
| Xanthine | $C_5H_4N_4O_2$ | $[M+H]^+$ | 153.0406565 | 3.87 | 1.13 | UP | ESI (+) |
| 2-Furancarboxaldehyde | $C_5H_4O_2$ | $[M+H]^+$ | 97.02875159 | 2.04 | 0.47 | DOWN | ESI (+) |
| 3-(3,4-dihydroxy-phenyl)prop-2-enoic acid | $C_9H_8O_4$ | $[M+H]^+$ | 181.0494479 | 3.49 | 6.70 | DOWN | ESI (+) |
| dTDP-forosamine | $C_{18}H_{31}N_3O_{12}P_2$ | $[M+3H]^+$ | 182.0528667 | 5.76 | 6.70 | DOWN | ESI (+) |
| Adenine | $C_5H_5N_5$ | $[M+H]^+$ | 136.0617373 | 4.28 | 3.70 | DOWN | ESI (+) |
| Arginyl-Tyrosine | $C_{15}H_{23}N_5O_4$ | $[M+H]^+$ | 338.1818176 | 2.96 | 1.09 | DOWN | ESI (+) |
| 5-Hydroxyectoine | $C_6H_{10}N_2O_3$ | $[M+H]^+$ | 159.0763844 | 3.61 | 0.49 | DOWN | ESI (+) |
| Gentisate aldehyde | $C_7H_6O_3$ | $[(M+H)-H_2O]^+$ | 121.0286007 | 2.88 | 9.87 | DOWN | ESI (+) |
| Phenylalanyl-Arginine | $C_{15}H_{23}N_5O_3$ | $[M+H]^+$ | 322.1868297 | 3.35 | 2.28 | DOWN | ESI (+) |
| 4-Acetamido-2-aminobu-tanoic acid | $C_6H_{12}N_2O_3$ | $[M+H]^+$ | 161.0920366 | 3.55 | 0.51 | UP | ESI (+) |
| 5-Hydroxykynurenine | $C_{10}H_{12}N_2O_4$ | $[M+2H]^+$ | 113.0478575 | 1.65 | 0.51 | DOWN | ESI (+) |
| Methionine | $C_5H_{11}NO_2S$ | $[M+H]^+$ | 150.0582532 | 4.11 | 0.70 | DOWN | ESI (+) |
| Aconitic acid | $C_6H_6O_6$ | $[(M+H)-H_2O]^+$ | 139.0025748 | 3.99 | 8.64 | UP | ESI (+) |
| Histamine | $C_5H_9N_3$ | $[M+H]^+$ | 112.0871771 | 2.61 | 0.46 | UP | ESI (+) |
| 5-oxo-pentanoic acid | $C_5H_8O_3$ | $[M+H]^+$ | 117.0548172 | 2.92 | 0.50 | UP | ESI (+) |
| Pyridoxamine 5'-phos-phate | $C_8H_{13}N_2O_5P$ | $[M+2H]^+$ | 125.0365667 | 5.17 | 0.51 | DOWN | ESI (+) |
| gamma-Glutamyl-gamma-aminobutyralde-hyde | $C_9H_{16}N_2O_4$ | $[M+H]^+$ | 217.1181573 | 3.09 | 4.60 | DOWN | ESI (+) |
| Gamma-glutamyl-putres-cine | $C_9H_{19}N_3O_3$ | $[(M+H)-H_2O]^+$ | 200.1392363 | 3.31 | 0.70 | DOWN | ESI (+) |
| Pyroglutamic acid | $C_5H_7NO_3$ | $[M+H]^+$ | 130.0499772 | 3.32 | 0.82 | DOWN | ESI (+) |
| Urocanic acid | $C_6H_6N_2O_2$ | $[(M+H)-H_2O]^+$ | 121.0398063 | 3.08 | 1.04 | UP | ESI (+) |
| Cyclic GMP | $C_{10}H_{12}N_5O_7P$ | $[M+H]^+$ | 346.0542684 | 2.83 | 1.77 | UP | ESI (+) |
| 2-Phenylacetamide | $C_8H_9NO$ | $[M+H]^+$ | 136.0757 | 3.89 | 3.77 | DOWN | ESI (+) |
| 4-Imidazolone-5-propa-noic acid | $C_6H_8N_2O_3$ | $[M+H]^+$ | 157.0607652 | 3.46 | 0.50 | DOWN | ESI (+) |
| Lysine | $C_6H_{14}N_2O_2$ | $[(M+H)-H_2O]^+$ | 129.1023572 | 3.27 | 0.50 | DOWN | ESI (+) |
| Proline | $C_5H_9NO_2$ | $[M+H]^+$ | 116.0707922 | 3.08 | 0.51 | DOWN | ESI (+) |
| Alanine | $C_3H_7NO_2$ | $[M+H]^+$ | 90.05536955 | 1.44 | 0.47 | DOWN | ESI (+) |
| Phenylpyruvic acid | $C_9H_8O_3$ | $[M+H]^+$ | 165.0545978 | 3.40 | 1.09 | DOWN | ESI (+) |
| Pyridoxamine | $C_8H_{12}N_2O_2$ | $[M+H]^+$ | 169.0970723 | 3.71 | 2.71 | DOWN | ESI (+) |
| 2'-Deoxyadenosine | $C_{10}H_{13}N_5O_3$ | $[M+H]^+$ | 252.1089583 | 2.78 | 2.57 | DOWN | ESI (+) |
| Creatinine | $C_4H_7N_3O$ | $[M+H]^+$ | 114.066471 | 2.27 | 0.50 | DOWN | ESI (+) |

*RT: retention time.

***Table S3.*** Putatively identified metabolites altered by the effect of LOT-II EO in sessile cells of *S.* Enteritidis.

| Metabolite | Formula | Adduct | *m/z* | Δppm | RT | Modulated | Ionization mode |
|---|---|---|---|---|---|---|---|
| Formiminoglutamic acid | $C_6H_{10}N_2O_4$ | $[(M-H)-H_2O]^-$ | 155.04506 | 3.81 | 0.54 | UP | ESI(−) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cyclic AMP | $C_{10}H_{12}N_5O_6P$ | $[M-H]^-$ | 328.04478 | 0.29 | 1.69 | DOWN | ESI(−) |
| N-(3,4-Dichlorophenyl)-malonamate | $C_9H_7Cl_2NO_3$ | $[(M+Na)-2H]^-$ | 267.9544 | 0.09 | 0.78 | DOWN | ESI(−) |
| Guanosine 2',3'-cyclic phosphate | $C_{10}H_{12}N_5O_7P$ | $[M-H]^-$ | 344.0395 | 0.08 | 1.78 | DOWN | ESI(−) |
| Serylcysteine | $C_6H_{12}N_2O_4S$ | $[(M-H)-H_2O]^-$ | 189.03301 | 1.95 | 0.51 | DOWN | ESI(−) |
| Arachidyl palmitate | $C_{36}H_{72}O_2$ | $[M-3H]^-$ | 177.84367 | 2.47 | 0.42 | UP | ESI(−) |
| Adenosine 5′-monophosphate | $C_{10}H_{14}N_5O_7P$ | $[M-H]^-$ | 346.05517 | 0.21 | 0.50 | DOWN | ESI(−) |
| 1-Deoxy-ribitol | $C_5H_{12}O_4$ | $[(M-H)-H_2O]^-$ | 117.05445 | 0.44 | 2.37 | DOWN | ESI(−) |
| Arbutin 6-phosphate | $C_{12}H_{17}O_{10}P$ | $[(M+HCOOH)-H]^-$ | 397.0536 | 0.10 | 5.37 | UP | ESI(−) |
| (1,2-Dichlorovinyl)glutathione | $C_{12}H_{17}Cl_2N_3O_6S$ | $[(M+Na)-2H]^-$ | 421.99864 | 2.27 | 5.38 | UP | ESI(−) |
| 1-Pyrroline-4-hydroxy-2-carboxylate | $C_5H_7NO_3$ | $[M-H]^-$ | 128.0341 | 4.48 | 0.43 | DOWN | ESI(−) |
| Galactonic acid | $C_6H_{12}O_7$ | $[M-H]^-$ | 195.0501 | 1.65 | 0.47 | DOWN | ESI(−) |
| Aspartyl-Proline | $C_9H_{14}N_2O_5$ | $[M-H]^-$ | 229.08219 | 1.06 | 1.33 | DOWN | ESI(−) |
| 2-Oxoarginine | $C_6H_{11}N_3O_3$ | $[M-H]^-$ | 172.07164 | 3.30 | 0.47 | DOWN | ESI(−) |
| 2-Keto-glutaramic acid | $C_5H_7NO_4$ | $[2M-H]^-$ | 289.06724 | 0.30 | 1.37 | DOWN | ESI(−) |
| Ketoleucine | $C_6H_{10}O_3$ | $[(M-H)-H_2O]^-$ | 129.05456 | 4.61 | 7.69 | DOWN | ESI(−) |
| O-Succinyl-homoserine | $C_8H_{13}NO_6$ | $[(M-H)-H_2O]^-$ | 200.05548 | 1.71 | 0.47 | DOWN | ESI(−) |
| Uridine | $C_9H_{12}N_2O_6$ | $[M-H]^-$ | 243.06162 | 0.44 | 1.29 | DOWN | ESI(−) |
| Citric acid | $C_6H_8O_7$ | $[M-H]^-$ | 191.01882 | 1.79 | 0.78 | DOWN | ESI(−) |
| Threonic Acid | $C_4H_8O_5$ | $[(M-H)-H_2O]^-$ | 117.01812 | 5.54 | 1.09 | DOWN | ESI(−) |
| Gamma-glutamyl-ornithine | $C_{10}H_{19}N_3O_5$ | $[M-H]^-$ | 260.12458 | 0.20 | 0.50 | DOWN | ESI(−) |
| Hydriodic acid | HI | $[M-H]^-$ | 126.90385 | 4.74 | 0.46 | DOWN | ESI(−) |
| Leucyl-threonine | $C_{10}H_{20}N_2O_4$ | $[M-H]^-$ | 231.13433 | 0.62 | 1.61 | DOWN | ESI(−) |
| Val Pro Ala | $C_{13}H_{23}N_3O_4$ | $[(M-H)-H_2O]^-$ | 266.15091 | 1.71 | 8.11 | DOWN | ESI(−) |
| Guanosine 2',3'-cyclic phosphate | $C_{10}H_{12}N_5O_7P$ | $[M-H]^-$ | 344.03943 | 0.35 | 1.85 | DOWN | ESI(−) |
| N2-Acetyl-ornithine | $C_7H_{14}N_2O_3$ | $[M-H]^-$ | 173.09211 | 2.83 | 0.98 | DOWN | ESI(−) |
| Glu Ala | $C_8H_{14}N_2O_5$ | $[(M-H)-H_2O]^-$ | 199.07150 | 1.86 | 1.41 | DOWN | ESI(−) |
| Val Ala Arg | $C_{14}H_{28}N_6O_4$ | $[M-H]^-$ | 343.20940 | 0.09 | 2.25 | DOWN | ESI(−) |
| Gly Pro Val | $C_{12}H_{21}N_3O_4$ | $[M-H]^-$ | 270.14542 | 0.16 | 1.65 | DOWN | ESI(−) |
| Glutaminylleucine | $C_{11}H_{21}N_3O_4$ | $[M-H]^-$ | 258.14549 | 0.44 | 2.84 | DOWN | ESI(−) |
| 2-Picolinic acid | $C_6H_5NO_2$ | $[M-H]^-$ | 122.02357 | 5.10 | 0.74 | DOWN | ESI(−) |
| Leucyl-Alanine | $C_9H_{18}N_2O_3$ | $[M-H]^-$ | 201.12361 | 1.46 | 2.09 | DOWN | ESI(−) |
| N6-acetyl-lysine | $C_8H_{16}N_2O_3$ | $[M-H]^-$ | 187.10778 | 2.52 | 0.90 | DOWN | ESI(−) |
| Thymidine | $C_{10}H_{14}N_2O_5$ | $[M-H]^-$ | 241.08237 | 0.25 | 2.09 | DOWN | ESI(−) |
| 2-(2-Carboxy-4-methylthiazol-5-yl)ethyl phosphate | $C_7H_{10}NO_6PS$ | $[M-H]^-$ | 265.98834 | 1.74 | 1.13 | DOWN | ESI(−) |
| Inosine | $C_{10}H_{12}N_4O_5$ | $[M-H]^-$ | 267.07295 | 0.05 | 2.37 | DOWN | ESI(−) |
| Threonic acid | $C_4H_8O_5$ | $[M-H]^-$ | 135.02875 | 4.31 | 0.62 | UP | ESI(−) |
| Asparaginyl-Isoleucine | $C_{10}H_{19}N_3O_4$ | $[M-H]^-$ | 244.12981 | 0.32 | 2.72 | DOWN | ESI(−) |
| Glutamylglycine | $C_7H_{12}N_2O_5$ | $[(M-H)-H_2O]^-$ | 185.05584 | 2.06 | 0.50 | DOWN | ESI(−) |
| 2'-Deoxyuridine | $C_9H_{12}N_2O_5$ | $[M-H]^-$ | 227.06665 | 0.59 | 0.98 | DOWN | ESI(−) |
| Uridine 5'-diphosphate | $C_9H_{14}N_2O_{12}P_2$ | $[(M-H)-H_2O]^-$ | 384.98185 | 5.05 | 7.14 | DOWN | ESI (−) |
| Malic acid | $C_4H_6O_5$ | $[(M-H)-H_2O]^-$ | 115.00247 | 5.67 | 0.50 | UP | ESI (−) |
| O-Acetylserine | $C_{13}H_{21}N_2O_7PS$ | $[M+2H]^+$ | 191.04840 | 1.18 | 0.70 | DOWN | ESI (+) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1-Stearoylglycerophosphoglycerol | $C_{24}H_{49}O_9P$ | $[M+H]^+$ | 513.31916 | 0.14 | 6.18 | DOWN | ESI (+) |
| N5-Acetyl-N2-gamma-glutamyl-L-ornithine | $C_{12}H_{21}N_3O_6$ | $[(M+H)-H_2O]^+$ | 286.13940 | 3.09 | 0.50 | DOWN | ESI (+) |
| Guanosine 2',3'-cyclic phosphate | $C_{10}H_{12}N_5O_7P$ | $[M+H]^+$ | 346.05428 | 2.79 | 1.80 | DOWN | ESI (+) |
| Adenosine 2'-phosphate | $C_{10}H_{14}N_5O_7P$ | $[M+H]^+$ | 348.06987 | 2.94 | 0.86 | DOWN | ESI (+) |
| N5-Hydroxy-ornithine | $C_5H_{12}N_2O_3$ | $[(M+H)-H_2O]^+$ | 131.08167 | 2.85 | 0.47 | UP | ESI (+) |
| Guanine | $C_5H_5N_5O$ | $[M+H]^+$ | 152.05664 | 4.14 | 0.78 | UP | ESI (+) |
| Adenosine 2',3'-cyclic phosphate | $C_{10}H_{12}N_5O_6P$ | $[M+H]^+$ | 330.05936 | 2.94 | 1.98 | DOWN | ESI (+) |
| Pyridoxine | $C_8H_{11}NO_3$ | $[M+H]^+$ | 170.08117 | 3.14 | 0.54 | UP | ESI (+) |
| Pantothenate | $C_9H_{17}NO_5$ | $[M+H]^+$ | 220.11785 | 2.90 | 2.94 | DOWN | ESI (+) |
| 6-Deoxy-glucose | $C_6H_{12}O_5$ | $[M+H]^+$ | 165.07572 | 3.43 | 5.37 | UP | ESI (+) |
| Asn Arg | $C_{10}H_{20}N_6O_4$ | $[(M+H)-H_2O]^+$ | 271.15292 | 3.93 | 1.83 | DOWN | ESI (+) |
| Ethanolamine | $C_2H_7NO$ | $[M+H]^+$ | 62.060602 | 0.35 | 0.47 | DOWN | ESI (+) |
| Indoleacetic acid | $C_{10}H_9NO_2$ | $[M+H]^+$ | 176.07052 | 3.56 | 5.08 | DOWN | ESI (+) |
| 5-Methyltetrahydropteroyltri-glutamate | $C_{25}H_{36}N_8O_{12}$ | $[M+2H]^+$ | 321.13042 | 0.10 | 5.37 | UP | ESI (+) |
| Glutamine | $C_5H_{10}N_2O_3$ | $[(M+H)-H_2O]^+$ | 275.13463 | 3.03 | 1.05 | DOWN | ESI (+) |
| Glutamate | $C_5H_9NO_4$ | $[M+H]^+$ | 148.06038 | 4.01 | 0.47 | DOWN | ESI (+) |
| Malyl N-acetyl-alpha-glucosaminide | $C_{12}H_{19}NO_{10}$ | $[M+H]^+$ | 338.10763 | 3.21 | 5.36 | UP | ESI (+) |
| 2-Hydroxy-2-methyl-butanenitrile | $C_5H_9NO$ | $[(2M+H)-H_2O]^+$ | 181.13370 | 2.18 | 3.92 | DOWN | ESI (+) |
| N-Acetyl-hexosamine | $C_8H_{15}NO_6$ | $[(M+H)-H_2O]^+$ | 204.08663 | 2.73 | 0.48 | DOWN | ESI (+) |
| Leu Phe | $C_{15}H_{22}N_2O_3$ | $[(M+2Na)-H]^+$ | 323.13589 | 3.54 | 5.33 | UP | ESI (+) |
| 7-Methyladenine | $C_6H_7N_5$ | $[2M+H]^+$ | 299.14852 | 1.42 | 5.36 | UP | ESI (+) |
| gamma-Glutamyl-2-aminobutyrate | $C_9H_{16}N_2O_5$ | $[(M+H)-H_2O]^+$ | 215.10237 | 3.74 | 0.51 | UP | ESI (+) |
| Acetyl-2-hydroxy-butanoic acid | $C_6H_{10}O_4$ | $[(M+H)-H_2O]^+$ | 129.05471 | 3.44 | 7.16 | UP | ESI (+) |
| Pyroglutamyl valine | $C_{10}H_{16}N_2O_4$ | $[M+H]^+$ | 229.11806 | 3.33 | 0.50 | UP | ESI (+) |
| Hydroxyacetone | $C_3H_6O_2$ | $[M+K]^+$ | 113.00012 | 3.17 | 0.47 | DOWN | ESI (+) |
| Met-Val-OH | $C_{15}H_{20}N_2O_6S$ | $[(M+H)-H_2O]^+$ | 339.10188 | 1.24 | 5.36 | UP | ESI (+) |
| Pantothenamide | $C_9H_{18}N_2O_4$ | $[M+H]^+$ | 219.13376 | 3.24 | 0.50 | DOWN | ESI (+) |
| 4-Aminobutanoate | $C_4H_9NO_2$ | $[(M+H)-H_2O]^+$ | 86.060484 | 1.11 | 9.44 | DOWN | ESI (+) |
| N-Acetylproline | $C_7H_{11}NO_3$ | $[M+H]^+$ | 158.08118 | 3.34 | 0.47 | UP | ESI (+) |
| N-palmitoyl tyrosine | $C_{25}H_{41}NO_4$ | $[(M+H)+2K]^+$ | 166.07902 | 3.42 | 5.36 | UP | ESI (+) |
| 2-Oxoarginine | $C_6H_{11}N_3O_3$ | $[M+H]^+$ | 174.08727 | 3.35 | 0.54 | UP | ESI (+) |
| Pantoate | $C_6H_{12}O_4$ | $[(M+2Na)-H]^+$ | 193.04429 | 5.04 | 0.70 | DOWN | ESI (+) |
| 5-Hydroxykynurenamine | $C_9H_{12}N_2O_2$ | $[M+H]^+$ | 181.09708 | 3.40 | 2.53 | DOWN | ESI (+) |
| Aminoacetone | $C_3H_7NO$ | $[(M+H)-H_2O]^+$ | 56.05009 | 1.30 | 12.77 | DOWN | ESI (+) |
| N-Acetylcadaverine | $C_7H_{16}N_2O$ | $[M+H]^+$ | 145.13358 | 3.79 | 0.87 | DOWN | ESI (+) |
| Triethylamine | $C_6H_{15}N$ | $[M+H]^+$ | 102.12796 | 2.77 | 10.02 | DOWN | ESI (+) |
| Asn-Arg | $C_{10}H_{20}N_6O_4$ | $[(M+H)-H_2O]^+$ | 271.15176 | 0.41 | 0.51 | DOWN | ESI (+) |
| Imidazolepropionic acid | $C_6H_8N_2O_2$ | $[(M+H)-H_2O]^+$ | 123.05543 | 3.30 | 1.17 | DOWN | ESI (+) |
| N-Acetylputrescine | $C_6H_{14}N_2O$ | $[(M+H)-H_2O]^+$ | 113.10756 | 2.72 | 0.47 | UP | ESI (+) |
| Homoserine lactone | $C_4H_7NO_2$ | $[(M+H)-H_2O]^+$ | 84.044834 | 1.13 | 0.47 | DOWN | ESI (+) |
| Adenine | $C_5H_5N_5$ | $[M+H]^+$ | 136.06174 | 4.20 | 3.70 | DOWN | ESI (+) |
| Cytosine | $C_4H_5N_3O$ | $[M+H]^+$ | 112.05080 | 2.43 | 0.82 | DOWN | ESI (+) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cadaverine | $C_5H_{14}N_2$ | $[M+H]^+$ | 103.12328 | 2.24 | 0.43 | UP | ESI (+) |
| LysoPA(i-19:0/0:0) | $C_{22}H_{45}O_7P$ | $[M+2H]^+$ | 227.15219 | 3.40 | 2.23 | UP | ESI (+) |
| 3-Butyn-1-al | $C_4H_4O$ | $[M+H]^+$ | 69.034038 | 0.12 | 5.37 | UP | ESI (+) |
| Thiamine monophosphate | $C_{12}H_{17}N_4O_4PS$ | $[M+2H]^+$ | 173.04204 | 6.84 | 0.47 | DOWN | ESI (+) |
| Homophenylalanine | $C_{10}H_{13}NO_2$ | $[M+H]^+$ | 180.10186 | 3.27 | 3.70 | DOWN | ESI (+) |
| Putrescine | $C_4H_{12}N2$ | $[M+H]^+$ | 89.10775 | 1.34 | 0.43 | UP | ESI (+) |
| N-Carbamoylputrescine | $C_5H_{13}N_3O$ | $[(M+H)-H_2O]^+$ | 114.10284 | 2.41 | 0.47 | DOWN | ESI (+) |
| 5-amino-pentanoic acid | $C_5H_{11}NO_2$ | $[(M+H)-H_2O]^+$ | 100.07600 | 2.20 | 0.50 | DOWN | ESI (+) |
| gamma-Glutamyl-beta-aminopropiononitrile | $C_8H_{13}N_3O_3$ | $[M+Na]^+$ | 222.08471 | 3.36 | 0.70 | UP | ESI (+) |
| 4-Hydroxyphenylglycine | $C_8H_9NO_3$ | $[M+H]^+$ | 168.06547 | 3.46 | 0.90 | UP | ESI (+) |
| Uracil | $C_4H_4N_2O_2$ | $[M+H]^+$ | 113.03476 | 2.99 | 2.05 | DOWN | ESI (+) |
| Phenylpyruvic acid | $C_9H_8O_3$ | $[M+H]^+$ | 165.05456 | 3.59 | 8.01 | DOWN | ESI (+) |
| Guanosine | $C_{10}H_{13}N_5O_5$ | $[M+H]^+$ | 284.09845 | 3.64 | 2.43 | DOWN | ESI (+) |
| Valine | $C_5H_{11}NO_2$ | $[M+H]^+$ | 118.08642 | 3.18 | 0.47 | DOWN | ESI (+) |
| 3-Cyanoalanine | $C_4H_6N_2O_2$ | $[(2M+H)-H_2O]^+$ | 211.08268 | 2.08 | 0.50 | DOWN | ESI (+) |
| D-Alanyl-D-alanine | $C_6H_{12}N_2O_3$ | $[M+H]^+$ | 161.09206 | 3.37 | 0.50 | DOWN | ESI (+) |
| Threonine | $C_4H_9NO_3$ | $[(M+H)-H_2O]^+$ | 102.05526 | 2.26 | 0.47 | DOWN | ESI (+) |
| 5-Aminopentanamide | $C_5H_{12}N_2O$ | $[M+H]^+$ | 117.10239 | 3.27 | 0.49 | DOWN | ESI (+) |
| Alanyl-Leucine | $C_9H_{18}N_2O_3$ | $[M+H]^+$ | 203.13897 | 2.87 | 2.75 | DOWN | ESI (+) |
| Lysine | $C_6H_{14}N_2O_2$ | $[M+H]^+$ | 147.11277 | 3.89 | 0.43 | DOWN | ESI (+) |
| N-Butyryl-homoserine lactone | $C_8H_{11}NO$ | $[(M+H)-H_2O]^+$ | 136.07569 | 3.96 | 3.74 | DOWN | ESI (+) |
| Biotin sulfoxide | $C_{10}H_{16}N_2O_4S$ | $[M+H]^+$ | 261.08995 | 3.62 | 2.09 | UP | ESI (+) |
| Thymine | $C_5H_6N_2O_2$ | $[M+H]^+$ | 127.05031 | 3.44 | 2.75 | DOWN | ESI (+) |
| Arginine | $C_6H_{14}N_4O_2$ | $[(M+H)-H_2O]^+$ | 157.10836 | 3.56 | 0.70 | UP | ESI (+) |
| N2-Succinyl-ornithine | $C_9H_{16}N_2O_5$ | $[(M+H)-H_2O]^+$ | 197.09200 | 3.05 | 3.30 | DOWN | ESI (+) |
| Tyramine | $C_8H_{11}NO$ | $[(M+H)-H_2O]^+$ | 120.08091 | 3.34 | 2.94 | DOWN | ESI (+) |
| beta-Alanyl-arginine | $C_9H_{19}N_5O_3$ | $[(M+H)-H_2O]^+$ | 228.14533 | 3.07 | 0.98 | DOWN | ESI (+) |
| Betaine | $C_5H_{11}NO_2$ | $[(2M+H)-H_2O]^+$ | 217.15451 | 3.26 | 2.39 | DOWN | ESI (+) |
| Ornithine | $C_5H_{12}N_2O_2$ | $[(M+H)-H_2O]^+$ | 115.08673 | 3.41 | 0.47 | DOWN | ESI (+) |
| N-gamma-Glutamylglutamine | $C_{10}H_{17}N_3O_6$ | $[(M+H)-H_2O]^+$ | 258.10816 | 3.20 | 0.87 | DOWN | ESI (+) |

*RT: retention time.

***Table S4.*** Antimicrobial activity of EOs on *Salmonella enterica* serovar Enteritidis ATCC 13076.

| Code | Plant species | *Salmonella* Enteritidis ATCC 13076 | |
|---|---|---|---|
| | | $MIC_{50}$ (mg/mL) | MBC (mg/mL) |
| SA | *Steiractinia aspera* Cuatrec. | > 1.5 | > 1.5 |
| TD-I | *Turnera diffusa* Willd | > 1.5 | > 1.5 |
| LOP | *Lippia origanoides* H.B.K quimiotipo felandreno | > 1.5 | > 1.5 |

| Code | Plant species | *Salmonella* Enteritidis ATCC 13076 | |
|---|---|---|---|
| | | **$MIC_{50}$ (mg/mL)** | **MBC (mg/mL)** |
| CM-I | *Calycolpus moritzianus* Burret | > 1.5 | > 1.5 |
| PA | *Piper aduncum* Lam | > 1.5 | > 1.5 |
| EQ | *Elaphandra quinquenervis* H.Rob | > 1.5 | > 1.5 |
| HD | *Hyptis dilatate* Benth | > 1.5 | > 1.5 |
| LOC | *L. origanoides* H.B.K quimiotipo carvacrol | 0.75 ± 0.0041 | 1.5 |
| LOCpT | *L. origanoides* H.B.K quimiotipo β-cariofileno-timol | > 1.5 | > 1.5 |
| LOT-I | *L. origanoides* H.B.K quimiotipo timol | > 1.5 | > 1.5 |
| TD-II | *T. diffusa* Willd | > 1.5 | > 1.5 |
| SV | *Satureja viminea* (L.) Kuntze | > 1.5 | > 1.5 |
| PS | *Psidium sartorianum* (O.Berg) Nied | > 1.5 | > 1.5 |
| VC | *Varronia curassavica* Jacq. | > 1.5 | > 1.5 |
| OB | *Ocimum basilicum* L. | > 1.5 | > 1.5 |
| CM-II | *C. moritzianus* Burret | > 1.5 | > 1.5 |
| TD-III | *T. diffusa* Willd | > 1.5 | > 1.5 |
| LOTC | *L. origanoides* H.B.K quimiotipo timol-*p*-cimeno | 0.37 ± 0.0070 | 0.75 |
| LOT-II | *L. origanoides* H.B.K quimiotipo timol | 0.37 ± 0.0043 | 0.75 |
| LM | *L. micromera* Schauer | > 1.5 | > 1.5 |

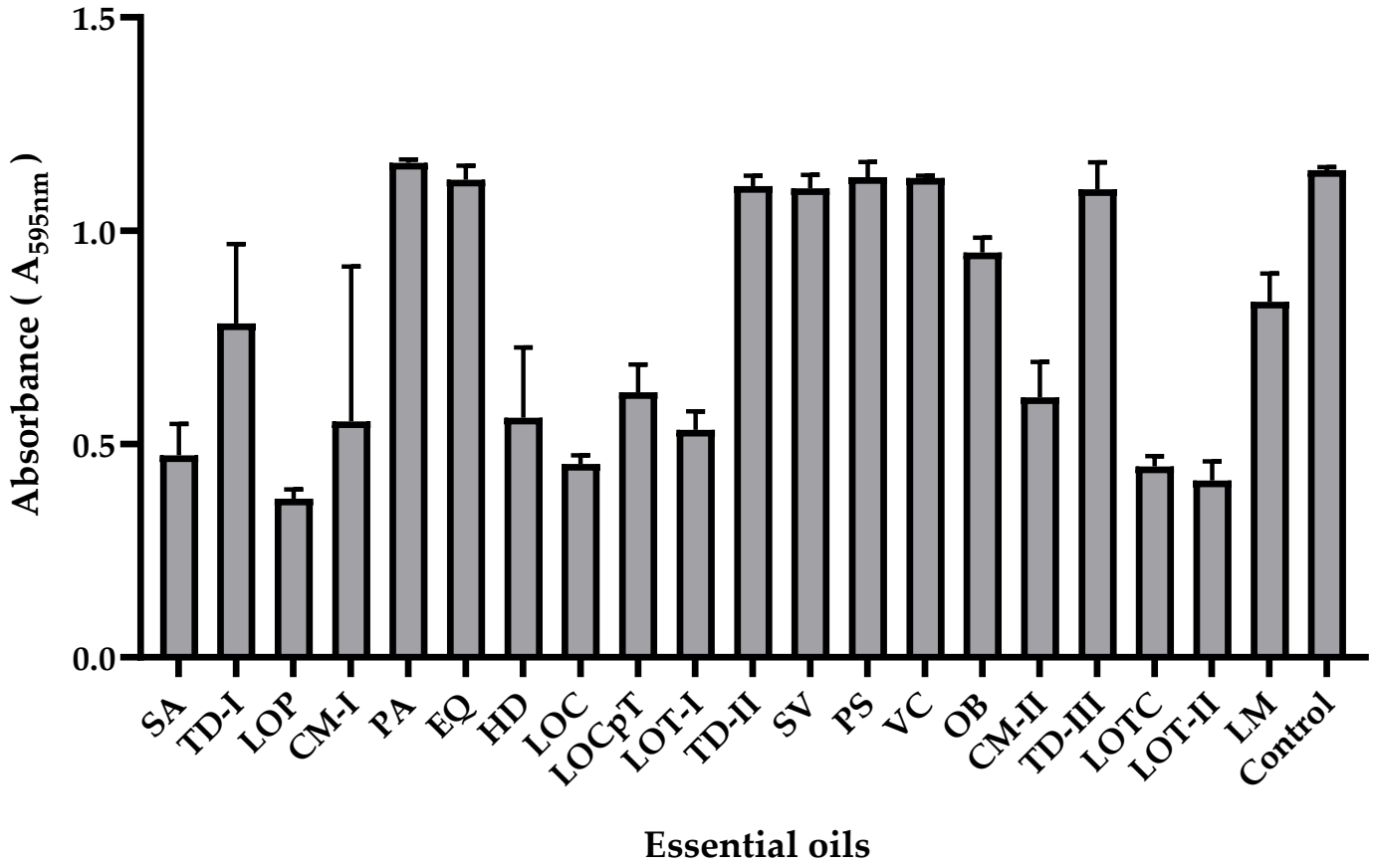


***Figure S1.*** Anti-biofilm activity of different essential oils on *Salmonella enterica* serovar Enteritidis ATCC 13076. The concentrations evaluated were as follows: EOs SA, TD-I, LOP, CM-I, PA, EQ, HD, TD-II, SV, PS, VC, OB, CM-II, and TD-III at 1.5 mg/mL; LOCpT and LM at 0.75 mg/mL; LOC and LOT-I at 0.18 mg/mL; LOTC and LOT-II at 0.13 mg/mL.