

SUPPORTING INFORMATION

Synthesis and Anti-phytopathogenic activity of 8- hydroxyquinoline Derivatives

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Table 1. Comparison of antifungal activity of identical groups modification at compound **2** 2-position and 7-position.

Compd. ^a	Conc ^b ($\mu\text{g/mL}$)	Average inhibition rate \pm SD (%) (n=3)				
		<i>B. C.</i> ^c	<i>S.S.</i> ^c	<i>F. G.</i> ^c	<i>F.O.</i> ^c	<i>M. O.</i> ^c
S-1 ^d	50	12.50 \pm 0.31	0.00 \pm 0.00	14.17 \pm 0.26	17.18 \pm 0.28	7.09 \pm 0.42
	25	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
S-2 ^d	50	10.42 \pm 0.19	0.00 \pm 0.00	19.79 \pm 0.58	16.30 \pm 0.72	0.00 \pm 0.00
	25	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00	9.62 \pm 0.38	0.00 \pm 0.00
4a ^e	50	97.92 \pm 0.72	100.00 \pm 0.00	0.00 \pm 0.00	36.00 \pm 0.74	31.56 \pm 0.72
	25	85.39 \pm 0.65	100.00 \pm 0.00	0.00 \pm 0.00	24.89 \pm 0.72	11.11 \pm 0.72
4b ^e	50	100.00 \pm 0.00	100.00 \pm 0.00	85.00 \pm 0.01	93.78 \pm 0.72	100.00 \pm 0.00
	25	98.33 \pm 0.72	86.04 \pm 0.97	78.75 \pm 0.01	79.56 \pm 0.72	74.44 \pm 0.95

^aCompd.: Compound. ^bConc: Concentration. ^c*B. C.*: *Botrytis cinerea*. *S.S.*: *Sclerotinia sclerotiorum*. *F. G.*: *Fusarium graminearum*. *F.O.*: *Fusarium oxysporum*. f. sp. *vasinfectum*. *M. O.*: *Magnaporthe oryzae*. ^d**S-1**: 2-((4-methylpiperazin-1-yl) methyl)-5-nitroquinolin-8-ol. **S-2**: 2-((4-ethylpiperazin-1-yl) methyl)-5-nitroquinolin-8-ol. ^e**4a**: 7-((4-methylpiperazin-1-yl) methyl)-5-nitroquinolin-8-ol. **4b**: 7-((4-ethyl piperazin-1-yl) methyl)-5-nitroquinolin-8-ol

Table 2. 95% confidence interval of EC₅₀ of series 8-hydroxyquinoline derivatives against five phytopathogenic fungi.

Compd. ^a	CI (95%)				
	<i>B. C.</i> ^b	<i>S.S.</i> ^b	<i>F. G.</i> ^b	<i>F.O.</i> ^b	<i>M. O.</i> ^b
HQ	0.0291~0.0376	0.0138~0.0240	0.0809~0.1070	0.1057~0.3203	0.0639~0.1455
2	0.0015~0.0029	0.0011~0.0023	0.0103~0.0149	0.0053~0.0080	0.0111~0.0235
4a	0.0588~0.1162	0.0389~0.0462	-	-	-
4b	0.0122~0.0223	0.0298~0.0423	-	-	-
4c	0.0492~0.0586	0.0447~0.0538	-	-	-
4d	0.0494~0.0581	0.0490~0.0825	-	-	-
4f	0.0268~0.0375	0.0430~0.0510	-	-	-
4g	0.0403~0.0490	0.0402~0.0489	-	-	-
4h	0.0267~0.0355	0.0385~0.0488	-	-	-
4i	0.0453~0.0544	0.0433~0.0540	-	-	-
4j	0.0320~0.0398	0.0180~0.0258	-	-	-
4k	0.0238~0.0322	0.0385~0.0485	-	-	-
4l	0.0184~0.0269	0.0197~0.0278	-	-	-
4m	0.0623~0.1001	0.0231~0.1527	-	-	-
4n	0.0245~0.0332	0.0176~0.0254	-	-	-
4o	0.0292~0.0372	0.0320~0.0406	-	-	-
5b	0.0351~0.0424	0.0305~0.0428	0.0135~0.0267	0.0203~0.0252	0.0131~0.0186
5c	0.0097~0.0158	0.0020~0.0044	0.0099~0.0200	0.0127~0.0167	0.0120~0.0162
5d	0.0126~0.0179	0.0165~0.0254	0.0126~0.0220	0.0188~0.0231	0.0131~0.0170

5e	0.0316~0.0386	0.0314~0.0376	-	-	-
5f	0.0300~0.0358	0.0294~0.0348	0.0155~0.0236	0.0308~0.0393	0.0247~0.0396
5g	0.0147~0.0202	0.0166~0.0251	0.0177~0.0292	0.0321~0.0414	0.0135~0.0177
5h	0.0403~0.0965	0.0344~0.0624	0.0156~0.0240	0.0209~0.0260	0.0124~0.0159
5i	0.0200~0.0484	0.0162~0.0209	0.0158~0.0212	0.0186~0.0228	0.0137~0.0177
5j	0.0309~0.0418	0.0196~0.1076	0.0190~0.0305	0.0178~0.0224	0.0135~0.0186
5k	0.0315~0.0383	0.0279~0.0336	-	-	-
5l	0.0181~0.0300	0.0122~0.0172	0.0169~0.0265	0.0209~0.0261	0.0104~0.0174
5m	0.0174~0.0310	0.0359~0.0483	-	-	-
5n	0.0076~0.0174	0.0164~0.0220	-	-	-
5o	0.0254~0.0416	0.0386~0.0455	-	-	-
5p	0.0167~0.0219	0.0299~0.0361	-	-	-
5q	0.0212~0.0273	0.0288~0.0364	-	-	-
ASB^c	0.1289~0.9781	0.0814~0.3259	0.0096~0.0544	0.0426~0.3758	-

^aCompd.: Compound. ^bB. C.: *Botrytis cinerea*. S.S.: *Sclerotinia sclerotiorum*. F. G.: *Fusarium graminearum*. F.O.: *Fusarium oxysporum*. f. sp. *vasinfectum*. M. O.: *Magnaporthe oryzae*.

^cASB : Azoxystrobin