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Reaction of N-Substituted 2,5-Dialkyl-1,4-benzoquinone Imines with Arenesulfinic Acids

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Abstract—Reactions of *N*-aroyl-, *N*-arylsulfonyl-, and *N*-(*N*-arylsulfonylbenzimidoyl)-2,5-dialkyl-1,4-benzoquinone imines with sodium arenesulfinates in acetic acid gave the corresponding 1,4-, 6,1-, and 1,6-addition products. Variation of the size and donor power of substituents in positions *2* and *5* of the quinoid ring almost does not affect the ratio of the addition products, which is determined mainly by the nature of substituent on the nitrogen atom.

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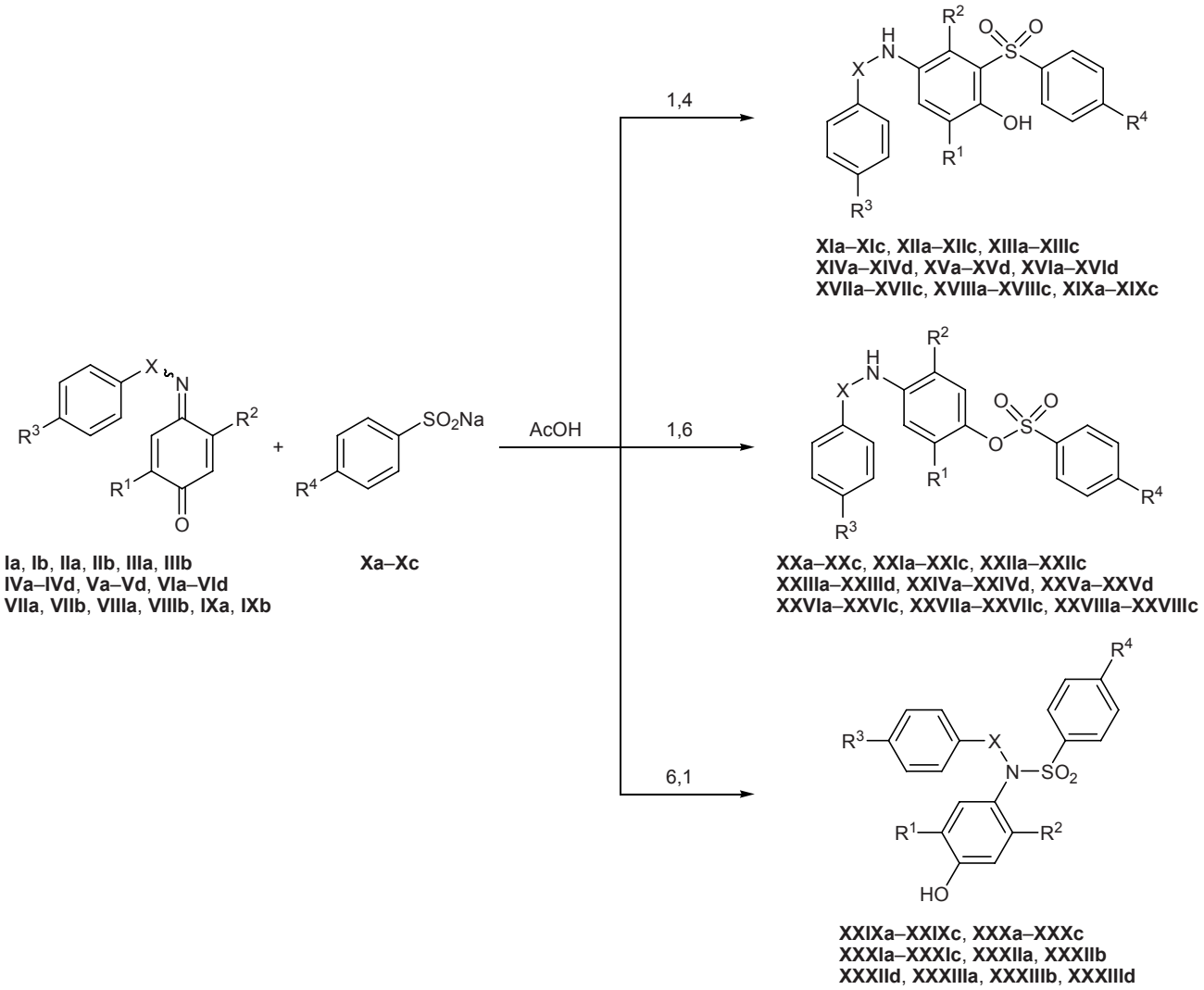
The present work continues our studies on reactions of various N-substituted 1,4-benzoquinone imines with arenesulfinic acids. We previously [1] examined reactions of symmetrical alkyl-substituted 1,4-benzoquinone imines with sodium arenesulfinates in acetic acid and found that the substituent on the nitrogen atom in initial quinone imines strongly affects their reactivity. In the reactions with *N*-arylsulfonyl derivatives, the addition pattern is determined by steric factor, i.e., by the size of substituents in the quinoid ring. The addition of sodium arenesulfinates to *N*-aroyl-1,4-benzoquinone imines, in which the substituent on the nitrogen atom is the strongest electron acceptor, is governed by the nature and position of substituents in the quinoid ring. *N*-(*N*-Arylsulfonylbenzimidoyl)-1,4-benzoquinone imines were found to occupy an intermediate place between *N*-aroyl and *N*-arylsulfonyl derivatives.

The goal of the present work was to compare the reactivities of analogous 2,5-substituted *N*-aroyl-, *N*-arylsulfonyl-, and *N*-(*N*-arylsulfonylbenzimidoyl)-1,4-benzoquinone imines **I**–**IX** toward sodium arenesulfinates **Xa**–**Xc**. The substrates and reagents were selected in such a way that the substituents in the *para* position of their aryl fragments (mainly methyl and methoxy groups) ensured unambiguous signal assignment in the ^{1}H NMR spectra of the products. The reactions were carried out in acetic acid using 2 equiv of sodium arenesulfinate **X** (Scheme 1). The product mixtures were analyzed by ^{1}H NMR spectroscopy both before and after recrystallization, and the corresponding filtrates and mother liquors were also examined. We thus succeeded in identifying products whose fraction in the reaction mixture did not exceed a few percent. The results are summarized in table. It was found that reactions of quinone imines **I**–**IX** with sodium arenesulfinates **X** gave the corresponding 1,4-, 6,1-, and 1,6-addition products. No 6,3-adduct analogous to those obtained from 2,6-dimethyl-1,4-benzoquinone imines [1] were detected.

The product structure was determined by analysis of their ^{1}H NMR spectra with account taken of our previous data [1]. As reference structures for *N*-arylsulfonyl derivatives we used compounds **XI**–**XIII** having only one proton in the aminophenol ring and sulfonimides **XXIX**–**XXXI** with two equivalent substituents on the nitrogen atom. In most cases, 1,4-addition products were isolated as individual substances. Compounds **XIVb**, **XVc**, and **XVIb** were oxidized to the corresponding quinone imines **XXXIV**–**XXXVI** with lead tetraacetate in acetic acid (Scheme 2), for ^{1}H NMR spectra of quinone imines are more informative than the spectra of aminophenols.

In the ^{1}H NMR spectrum of quinone imine **XXXIV**, signal from the only proton in the quinoid ring resonated as a quartet at δ 6.67 ppm, one methyl group gave a doublet at δ 1.88 ppm, and protons in the other methyl group appeared as a singlet at δ 2.92 ppm. The ^{1}H NMR spectrum of quinone imine **XXXV** contained a broadened singlet at δ 6.61 ppm from the proton in the quinoid ring, a multiplet at

Scheme 1.



Ia, **Ib**, **IIa**, **IIb**, **IIIa**, **IIIb**
IVa–IVd, **Va–Vd**, **VIa–VId**
VIIa, **VIIb**, **VIIIa**, **VIIIb**, **IXa**, **IXb**

Xa–Xc

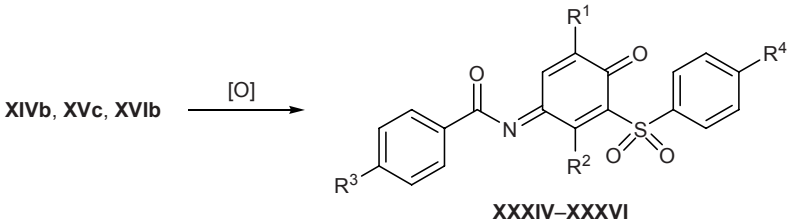
XIa–XIc, **XIIa–XIIc**, **XIIIa–XIIIc**
XIVa–XIVd, **XVa–XVd**, **XVIa–XVId**
XVIIa–XVIIc, **XVIIIa–XVIIIc**, **XIXa–XIXc**

XXa–XXc, **XXIa–XXIc**, **XXIIa–XXIIc**
XXIIIa–XXIIId, **XXIVa–XXIVd**, **XXVa–XXVd**
XXVIa–XXVIc, **XXVIIa–XXVIIc**, **XXVIIIa–XXVIIIc**

XXIXa–XXIXc, **XXXa–XXXc**
XXXIa–XXXIc, **XXXIIa**, **XXXIIb**
XXXIId, **XXXIIIa**, **XXXIIIb**, **XXXIIId**

I–III, **XI–XIII**, **XX–XXII**, **XXIX–XXXI**, X = SO_2; **IV–VI**, **XIV–XVI**, **XXIII–XXV**, **XXXII**, **XXXIII**, X = CO; **VII–IX**, **XVII–XIX**, **XXVI–XXVIII**, X = C(=NSO_2Ar); **I**, **IV**, **VII**, **XI**, **XIV**, **XVII**, **XX**, **XXIII**, **XXVI**, **XXIX**, **XXXII**, $R^1 = R^2$ = Me; **II**, **V**, **VIII**, **XII**, **XV**, **XVIII**, **XXI**, **XXIV**, **XXVII**, **XXX**, **XXXIII**, R^1 = *i*-Pr, R^2 = Me; **III**, **VI**, **IX**, **XIII**, **XVI**, **XIX**, **XXII**, **XXV**, **XXVIII**, **XXXI**, R^1 = Me, R^2 = *i*-Pr; **I–III**, R^3 = Me (**a**), MeO (**b**); **IV–VI**, R^3 = H (**a**), Cl (**b**), MeO (**c**), Me (**d**); **VII–IX**, R^3 = H (**a**, **b**), Ar = 4-MeC_6H_4 (**a**), 4-$MeOC_6H_4$ (**b**); **X**, R^4 = Me (**a**), MeO (**b**), Cl (**c**); **XI–XIII**, **XX–XXII**, **XXIX–XXXI**, R^3 = Me (**a**), MeO (**b**, **c**), R^4 = MeO (**a**, **c**), Cl (**b**); **XIV–XVI**, **XXIII–XXV**, **XXXII**, **XXXIII**, R^3 = H (**a**), Cl (**b**), MeO (**c**), Me (**d**), R^4 = Me (**a**), MeO (**b**, **d**), Cl (**c**); **XVII–XIX**, **XXVI–XXVIII**, R^3 = H (**a**, **b**, **c**), Ar = 4-MeC_6H_4 (**a**), 4-$MeOC_6H_4$ (**b**, **c**), R^4 = MeO (**a**, **b**), Me (**c**).

Scheme 2.



XIVb, **XVc**, **XVIb**

XXXIV–XXXVI

XXXIV, $R^1 = R^2$ = Me, R^3 = Cl, R^4 = MeO; **XXXV**, R^1 = *i*-Pr, R^2 = Me, R^3 = MeO, R^4 = Cl; **XXXVI**, R^1 = Me, R^2 = *i*-Pr, R^3 = Cl, R^4 = OMe.

Product composition in the reactions of 2,5-dialkyl-1,4-benzoquinone imines **I–IX** with sodium arenesulfinates **Xa–Xc** (Scheme 1)

X	R^1	R^2	R^3	R^4	Fraction of addition products, %		
					1,4	6,1	1,6
SO_2	Me	Me	Me	MeO	93	3	4
SO_2	Me	Me	MeO	Cl	95	2	3
SO_2	Me	Me	MeO	MeO	90	3	7
CO	Me	Me	H	Me	79	5	16
CO	Me	Me	Cl	MeO	64	7	29
CO	Me	Me	MeO	Cl	94	–	6
CO	Me	Me	Me	MeO	76	4	20
$C(=NSO_2C_6H_4Me\text{-}4)$	Me	Me	H	MeO	80	–	20
$C(=NSO_2C_6H_4OMe\text{-}4)$	Me	Me	H	MeO	78	–	22
$C(=NSO_2C_6H_4OMe\text{-}4)$	Me	Me	H	Me	79	–	21
SO_2	*i*-Pr	Me	Me	MeO	90	2	8
SO_2	*i*-Pr	Me	MeO	Cl	91	3	6
SO_2	*i*-Pr	Me	MeO	MeO	93	2	5
CO	*i*-Pr	Me	H	Me	82	6	12
CO	*i*-Pr	Me	Cl	MeO	67	10	23
CO	*i*-Pr	Me	MeO	Cl	89	–	11
CO	*i*-Pr	Me	Me	MeO	79	6	15
$C(=NSO_2C_6H_4Me\text{-}4)$	*i*-Pr	Me	H	MeO	69	–	31
$C(=NSO_2C_6H_4OMe\text{-}4)$	*i*-Pr	Me	H	MeO	71	–	29
$C(=NSO_2C_6H_4OMe\text{-}4)$	*i*-Pr	Me	H	Me	73	–	27
SO_2	Me	*i*-Pr	Me	MeO	75	9	16
SO_2	Me	*i*-Pr	MeO	Cl	80	6	14
SO_2	Me	*i*-Pr	MeO	MeO	79	7	14
CO	Me	*i*-Pr	H	Me	70	–	30
CO	Me	*i*-Pr	Cl	MeO	54	–	46
CO	Me	*i*-Pr	MeO	Cl	87	–	13
CO	Me	*i*-Pr	Me	MeO	79	–	21
$C(=NSO_2C_6H_4Me\text{-}4)$	Me	*i*-Pr	H	MeO	74	–	26
$C(=NSO_2C_6H_4OMe\text{-}4)$	Me	*i*-Pr	H	MeO	73	–	27
$C(=NSO_2C_6H_4OMe\text{-}4)$	Me	*i*-Pr	H	Me	72	–	28

δ 2.81–2.91 ppm from the isopropyl CH group, and a singlet at δ 2.93 ppm from the methyl group. Quinone imine **XXXVI** displayed in the ^{1}H NMR spectrum a quartet at δ 6.54 ppm from 6-H, and a doublet at δ 1.85 ppm from the methyl protons. These findings unambiguously indicate that the arylsulfonyl group in **XXXIV**–**XXXVI** occupies *ortho* position with respect to the carbonyl carbon atom in the quinoid ring.

Analysis of the results given in table shows that the second *ortho* position in the quinoid ring of *N*-arylsulfonyl-2,5-dialkyl-1,4-benzoquinone imines **I–III** is more reactive toward arenesulfinate ions. In the reactions with *N*-(*N*-arylsulfonylbenzimidoyl) benzoquinone imines **VII–IX**, the main factor determining their reactivity is steric hindrances created by the substituent on the nitrogen atom [bulky $ArSO_2N{=}C(Ph)$ group], so that no addition products at the nitrogen atom were isolated. In all cases, the size and electron-donor properties of the alkyl groups in positions *2* and *5* of the quinoid ring do not affect the product ratio to an appreciable extent, and the main factor is the nature and size of the substituent on the nitrogen atom.

EXPERIMENTAL

The ^{1}H NMR spectra were measured on a Varian VXR-300 spectrometer at 300 MHz from solutions in acetone-d_6 (**XI**–**XIII**, **XX**–**XXII**, **XXIX**–**XXXI**), DMSO-d_6 (**XIV**–**XIX**, **XXIII**–**XXVIII**, **XXXII**, **XXXIII**), and $CDCl_3$ (**XXXIV**–**XXXVI**); the chemical shifts were measured relative to TMS. Analytical thin-layer chromatography was performed on Silufol UV-254 plates; samples were applied from solutions in chloroform, benzene–hexane (10 : 1) was used as eluent, and spots were visualized under UV light.

Initial quinone imines **I**–**III** were synthesized according to the procedure reported in [2] by oxidation of the corresponding aminophenols with sodium dichromate in acetic acid. Quinone imines **IV**–**IX** and **XXXIV**–**XXXVI** were obtained as described in [3] by oxidation of the corresponding aminophenols with lead tetraacetate in acetic acid. The properties of compounds **Ia**–**IIIa** [4], **IVa**, **IVd**, **Va**, **Vd**, **VIa**, and **VId** [5] were consistent with published data. Sodium arenesulfinates **Xa**–**Xc** were prepared as reported in [6].

***N*-(2,5-Dimethyl-4-oxocyclohexa-2,5-dien-1-ylidene)-4-methoxybenzenesulfonamide (Ib).** Yield 72%, mp 111–112°C. Found, %: N 4.47, 4.83; S 10.23, 10.47. $C_{15}H_{15}NO_4S$. Calculated, %: N 4.59; S 10.50.

***N*-(5-Isopropyl-2-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-4-methoxybenzenesulfonamide (IIb).** Yield 81%, mp 85–86°C. Found, %: N 4.09, 4.32; S 9.42, 9.45. $C_{17}H_{19}NO_4S$. Calculated, %: N 4.20; S 9.62.

***N*-(2-Isopropyl-5-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-4-methoxybenzenesulfonamide (IIIb).** Yield 79%, mp 96–98°C. Found, %: N 4.02, 4.19; S 9.63, 9.71. $C_{17}H_{19}NO_4S$. Calculated, %: N 4.20; S 9.62.

4-Chloro-*N*-(2,5-dimethyl-4-oxocyclohexa-2,5-dien-1-ylidene)benzamide (IVb). Yield 69 %, mp 127–129°C. Found, %: N 5.00, 5.24. $C_{15}H_{12}ClNO_2$. Calculated, %: N 5.12.

***N*-(2,5-Dimethyl-4-oxocyclohexa-2,5-dien-1-ylidene)-4-methoxybenzamide (IVc).** Yield 41%, mp 106–107°C. Found, %: N 5.23, 5.44. $C_{16}H_{15}NO_3$. Calculated, %: N 5.20.

4-Chloro-*N*-(5-isopropyl-2-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)benzamide (Vb). Yield 23%, mp 71–73°C. Found, %: N 4.47, 4.58. $C_{17}H_{16}ClNO_2$. Calculated, %: N 4.64.

***N*-(5-Isopropyl-2-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-4-methoxybenzamide (Vc).** Yield 51%, mp 81–83°C. Found, %: N 4.70, 4.86. $C_{18}H_{19}NO_3$. Calculated, %: N 4.71.

4-Chloro-*N*-(2-isopropyl-5-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)benzamide (VIb). Yield 61%, mp 96–98°C. Found, %: N 4.53, 4.78. $C_{17}H_{16}ClNO_2$. Calculated, %: N 4.64.

***N*-(2-Isopropyl-5-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-4-methoxybenzamide (VIc).** Yield 54%, mp 81–82°C. Found, %: N 4.42, 4.61. $C_{18}H_{19}NO_3$. Calculated, %: N 4.71.

***N*-(2,5-Dimethyl-4-oxocyclohexa-2,5-dien-1-ylidene)-*N*′-(4-methylphenylsulfonyl)benzimidamide (VIIa).** Yield 90%, mp 131.5–132°C. Found, %: N 7.07, 7.35; S 8.11, 8.34. $C_{22}H_{20}N_2O_3S$. Calculated, %: N 7.14; S 8.17.

***N*-(2,5-Dimethyl-4-oxocyclohexa-2,5-dien-1-ylidene)-*N*′-(4-methoxyphenylsulfonyl)benzimidamide (VIIb).** Yield 93%, mp 106–108°C. Found, %: N 6.66, 6.93; S 7.91 7.98. $C_{22}H_{20}N_2O_4S$. Calculated, %: N 6.86; S 7.85.

***N*-(5-Isopropyl-2-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-*N*′-(4-methylphenylsulfonyl)benzimidamide (VIIIa).** Yield 93%, mp 102–104°C. Found, %: N 6.62, 6.75; S 7.54, 7.76. $C_{24}H_{24}N_2O_3S$. Calculated, %: N 6.66; S 7.62.

***N*-(5-Isopropyl-2-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-*N*′-(4-methoxyphenylsulfonyl)benzimidamide (VIIIb).** Yield 88%, mp 74–76°C. Found, %: N 6.45, 6.61; S 7.37, 7.44. $C_{24}H_{24}N_2O_4S$. Calculated, %: N 6.42; S 7.35.

***N*-(2-Isopropyl-5-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-*N*′-(4-methylphenylsulfonyl)benzimidamide (IXa).** Yield 74%, mp 78–80°C. Found, %: N 6.63, 6.84; S 7.55, 7.69. $C_{24}H_{24}N_2O_3S$. Calculated, %: N 6.66; S 7.62.

***N*-(2-Isopropyl-5-methyl-4-oxocyclohexa-2,5-dien-1-ylidene)-*N*′-(4-methoxyphenylsulfonyl)benzimidamide (IXb).** Yield 87%, mp 86–88°C. Found, %: N 6.45, 6.69; S 7.46, 7.83. $C_{24}H_{24}N_2O_4S$. Calculated, %: N 6.42; S 7.35.

Reaction of quinone imines I–IX with sodium arenesulfinates Xa–Xc (*general procedure*). A solution of 2 mmol of quinone imine **I**–**IX** in 20 ml of glacial acetic acid was heated to the boiling point, 4 mmol of sodium arenesulfinate **Xa**–**Xc** was added, and the mixture was heated until it became colorless, cooled, and diluted with water until complete precipitation. The colorless precipitate was filtered off and

washed first with cold and then with warm water. A part of the product was recrystallized from acetic acid, the mother liquor was diluted with water, and the precipitate was filtered off. All three samples were analyzed by ^{1}H NMR spectroscopy.

***N*-[4-Hydroxy-3-(4-methoxyphenylsulfonyl)-2,5-dimethylphenyl]-4-methylbenzenesulfonamide (XIa).** Yield 69%, mp 149–151°C. ^{1}H NMR spectrum, δ, ppm: 1.76 s (3H, 5-CH_3), 2.19 s (3H, 2-CH_3), 2.34 s (3H, C**H**$_3$C$_6$H$_4$), 3.97 s (3H, MeO), 7.18 s (1H, 6-H), 7.17–7.78 d.d (4H, MeOC$_6$**H**$_4$, *J* = 8.7 Hz), 7.20–7.36 d.d (4H, CH$_3$C$_6$**H**$_4$, *J* = 8.7 Hz), 8.31 s (1H, OH), 10.92 s (1H, NH). Found, %: N 2.79, 3.12; S 13.54, 13.98. $C_{22}H_{23}NO_6S_2$. Calculated, %: N 3.03; S 13.89.

***N*-[3-(4-Chlorophenylsulfonyl)-4-hydroxy-2,5-dimethylphenyl]-4-methoxybenzenesulfonamide (XIb).** ^{1}H NMR spectrum, δ, ppm: 1.87 s (3H, 5-CH_3), 2.09 s (3H, 2-CH_3), 3.80 s (3H, MeO), 6.97–7.30 d.d (4H, MeOC$_6$**H**$_4$, *J* = 9.0 Hz), 7.09 s (1H, 6-H), 7.70–7.79 d.d (4H, ClC$_6$H$_4$, *J* = 8.7 Hz), 9.43 s (1H, OH), 10.24 s (1H, NH).

***N*-[4-Hydroxy-3-(4-methoxyphenylsulfonyl)-2,5-dimethylphenyl]-4-methoxybenzenesulfonamide (XIc).** ^{1}H NMR spectrum, δ, ppm: 1.77 s (3H, 5-CH_3), 2.11 s (3H, 2-CH_3), 3.79 s and 3.87 s (3H each, MeO), 6.94–7.39 d.d (4H, C$_6$H$_4$, *J* = 9.0 Hz), 7.08 s (1H, 6-H), 7.14–7.72 d.d (4H, C$_6$H$_4$, *J* = 9.0 Hz), 9.38 s (1H, OH), 10.52 s (1H, NH).

***N*-[4-Hydroxy-5-isopropyl-3-(4-methoxyphenylsulfonyl)-2-methylphenyl]-4-methylbenzenesulfonamide (XIIa).** Yield 70%, mp 146–148°C. ^{1}H NMR spectrum, δ, ppm: 1.06 d (6H, **Me**$_2$CH, *J* = 6.9 Hz), 2.02 s (3H, 2-CH_3), 2.37 s (3H, C**H**$_3$C$_6$H$_4$), 3.20–3.34 m (1H, 5-CH), 3.96 s (3H, MeO), 6.99 s (1H, 6-H), 7.19–7.81 d.d (4H, MeOC$_6$**H**$_4$, *J* = 8.1 Hz), 7.25–7.42 d.d (4H, MeC$_6$**H**$_4$, *J* = 8.7 Hz), 8.18 s (1H, OH), 10.97 s (1H, NH). Found, %: N 2.64, 2.77; S 13.07, 13.54. $C_{24}H_{27}NO_6S_2$. Calculated, %: N 2.86; S 13.10.

***N*-[3-(4-Chlorophenylsulfonyl)-4-hydroxy-5-isopropyl-2-methylphenyl]-4-methoxybenzenesulfonamide (XIIb).** ^{1}H NMR spectrum, δ, ppm: 0.95 d (6H, **Me**$_2$CH, *J* = 6.9 Hz), 2.07 s (3H, 2-CH_3), 3.07–3.21 m (1H, 5-CH), 3.81 s (3H, MeO), 6.78 s (1H, 6-H), 7.02–7.45 d.d (4H, MeOC$_6$**H**$_4$, *J* = 8.7 Hz), 7.72–7.82 d.d (4H, ClC$_6$H$_4$, *J* = 8.7 Hz), 9.29 s (1H, OH), 10.34 s (1H, NH).

***N*-[4-Hydroxy-5-isopropyl-3-(4-methoxyphenylsulfonyl)-2-methylphenyl]-4-methoxybenzenesulfonamide (XIIc).** ^{1}H NMR spectrum, δ, ppm: 0.97 d (6H, **Me**$_2$CH, *J* = 6.9 Hz), 2.01 s (3H, 2-CH_3), 3.10–3.23 m (1H, 5-CH), 3.80 s and 3.87 s (3H each, MeO), 6.76 s (1H, 6-H), 7.04–7.43 d.d (4H, C$_6$H$_4$, *J* = 8.4 Hz), 7.17–7.75 d.d (4H, C$_6$H$_4$, *J* = 8.7 Hz), 9.26 s (1H, OH), 10.61 s (1H, NH).

***N*-[4-Hydroxy-2-isopropyl-3-(4-methoxyphenylsulfonyl)-5-methylphenyl]-4-methylbenzenesulfonamide (XIIIa).** Yield 55%, mp 172–173°C. ^{1}H NMR spectrum, δ, ppm: 1.03 d (6H, **Me**$_2$CH, *J* = 6.9 Hz), 2.02 s (3H, 5-CH_3), 2.46 s (3H, C**H**$_3$C$_6$H$_4$), 3.67–3.80 m (1H, 2-CH), 3.93 s (3H, MeO), 6.79 s (1H, 6-H), 7.19–7.81 d.d (4H, MeC$_6$**H**$_4$, *J* = 8.7 Hz), 7.45–7.73 d.d (4H, MeOC$_6$**H**$_4$, *J* = 8.1 Hz), 8.98 s (1H, OH), 11.15 s (1H, NH). Found, %: N 2.69, 2.91; S 12.96, 13.28. $C_{24}H_{27}NO_6S_2$. Calculated, %: N 2.86; S 13.10.

***N*-[3-(4-Chlorophenylsulfonyl)-4-hydroxy-2-isopropyl-5-methylphenyl]-4-methoxybenzenesulfonamide (XIIIb).** ^{1}H NMR spectrum, δ, ppm: 1.06 d (6H, **Me**$_2$CH, *J* = 6.6 Hz), 1.95 s (3H, 5-CH_3), 3.59–3.73 m (1H, 2-CH), 3.87 s (3H, MeO), 6.57 s (1H, 6-H), 7.17–7.73 d.d (4H, MeOC$_6$**H**$_4$, *J* = 9.0 Hz), 7.73–7.85 d.d (4H, ClC$_6$H$_4$, *J* = 8.7 Hz), 9.04 s (1H, OH), 10.53 s (1H, NH).

***N*-[4-Hydroxy-2-isopropyl-3-(4-methoxyphenylsulfonyl)-5-methylphenyl]-4-methoxybenzenesulfonamide (XIIIc).** ^{1}H NMR spectrum, δ, ppm: 1.00 d (6H, **Me**$_2$CH, *J* = 6.6 Hz), 1.95 s (3H, 5-CH_3), 3.63–3.77 m (1H, 2-CH), 3.86 s and 3.87 s (3H each, MeO), 6.52 s (1H, 6-H), 7.17–7.74 d.d and 7.17–7.77 d.d (4H each, C$_6$H$_4$, *J* = 8.7 Hz), 8.96 s (1H, OH), 10.85 s (1H, NH).

***N*-[4-Hydroxy-2,5-dimethyl-3-(4-methylphenylsulfonyl)phenyl]benzamide (XIVa).** Yield 55%, mp 209–210°C. ^{1}H NMR spectrum, δ, ppm: 2.21 s (6H, 2-CH_3, 5-CH_3), 2.41 s (3H, C**H**$_3$C$_6$H$_4$), 7.41 s (1H, 6-H), 7.45–7.57 m (5H, Ph), 7.80–7.93 d.d (4H, C$_6$H$_4$, *J* = 8.1 Hz), 9.81 s (1H, OH), 10.41 br.s (1H, NH). Found, %: N 3.28, 3.48; S 7.86, 7.98. $C_{22}H_{21}NO_4S$. Calculated, %: N 3.54; S 8.11.

4-Chloro-*N*-[4-hydroxy-3-(4-methoxyphenylsulfonyl)-2,5-dimethylphenyl]benzamide (XIVb). Yield 42%, mp 177–178°C. ^{1}H NMR spectrum, δ, ppm: 2.20 s (6H, CH_3), 3.85 s (3H, MeO), 7.39 s (1H, 6-H), 7.17–7.86 d.d (4H, MeOC$_6$**H**$_4$, *J* = 8.7 Hz), 7.58–7.95 d.d (4H, ClC$_6$H$_4$, *J* = 8.7 Hz), 9.93 s (1H, OH), 10.45 br.s (1H, NH). Found, %: N 3.02, 3.28; S 7.05, 7.39. $C_{22}H_{20}ClNO_5S$. Calculated, %: N 3.14; S 7.19.

***N*-[3-(4-Chlorophenylsulfonyl)-4-hydroxy-2,5-dimethylphenyl]-4-methoxybenzamide (XIVc).** Yield

67%, mp 168–170°C. ^{1}H NMR spectrum, δ, ppm: 2.18 s (3H, 5-H_3), 2.27 s (3H, 2-CH_3), 3.82 s (3H, MeO), 7.39 s (1H, 6-H), 7.04–7.93 d.d (4H, MeO-$C_6\mathbf{H}_4$, J = 8.7 Hz), 7.72–7.91 d.d (4H, ClC_6H_4, J = 8.4 Hz), 9.73 s (1H, OH), 10.09 br.s (1H, NH). Found, %: N 3.06, 3.23; S 7.02, 7.16. $C_{22}H_{20}ClNO_5S$. Calculated, %: N 3.14; S 7.19.

***N*-[4-Hydroxy-3-(4-methoxyphenylsulfonyl)-2,5-dimethylphenyl]-4-methylbenzamide (XIVd).** Yield 49%, mp 196–197°C. ^{1}H NMR spectrum, δ, ppm: 2.23 s (3H, 5-CH_3), 2.24 s (3H, 2-CH_3), 2.38 s (3H, $C\mathbf{H}_3C_6H_4$), 3.91 s (3H, MeO), 7.46 s (1H, 6-H), 7.17–7.87 d.d (4H, $MeC_6\mathbf{H}_4$, J = 9.0 Hz), 7.29–8.87 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 9.03 s (1H, OH), 10.83 s (1H, NH). Found, %: N 3.28, 3.44; S 7.50, 7.81. $C_{23}H_{23}NO_5S$. Calculated, %: N 3.29; S 7.54.

***N*-[4-Hydroxy-5-isopropyl-2-methyl-3-(4-methylphenylsulfonyl)phenyl]benzamide (XVa).** Yield 58%, mp 208–209°C. ^{1}H NMR spectrum, δ, ppm: 1.20 d (6H, $\mathbf{Me}_2$CH), 2.16 s (3H, 2-CH_3), 2.40 s (3H, $C\mathbf{H}_3C_6H_4$), 3.28–3.41 m (1H, 5-CH), 7.42 s (1H, 6-H), 7.47–7.57 m (5H, Ph), 7.80–7.94 d.d (4H, $MeC_6\mathbf{H}_4$, J = 8.1 Hz), 9.87 s (1H, OH), 10.55 br.s (1H, NH). Found, %: N 3.28, 3.46; S 7.52, 7.85. $C_{24}H_{25}NO_4S$. Calculated, %: N 3.31; S 7.57.

4-Chloro-*N*-[4-hydroxy-5-isopropyl-3-(4-methoxyphenylsulfonyl)-2-methylphenyl]benzamide (XVb). ^{1}H NMR spectrum, δ, ppm: 1.20 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.16 s (3H, 2-CH_3), 3.25–3.39 m (1H, 5-CH), 3.86 s (3H, MeO), 7.40 s (1H, 6-H), 7.18–7.85 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.58–7.95 d.d (4H, 4-$ClC_6\mathbf{H}_4$, J = 8.7 Hz), 9.94 s (1H, OH), 10.65 br.s (1H, NH).

***N*-[3-(4-Chlorophenylsulfonyl)-4-hydroxy-5-isopropyl-2-methylphenyl]-4-methoxybenzamide (XVc).** Yield 62%, mp 164–166°C. ^{1}H NMR spectrum, δ, ppm: 1.17 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.20 s (3H, 2-CH_3), 3.24–3.38 m (1H, 5-CH), 3.82 s (3H, MeO), 7.41 s (1H, 6-H), 7.03–7.92 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.74–7.92 d.d (4H, $ClC_6\mathbf{H}_4$, J = 9.0 Hz), 9.75 s (1H, OH), 10.19 br.s (1H, NH). Found, %: N 3.01, 3.24; S 6.70, 6.84. $C_{24}H_{24}ClNO_5S$. Calculated, %: N 2.96; S 6.76.

***N*-[4-Hydroxy-5-isopropyl-3-(4-methoxyphenylsulfonyl)-2-methylphenyl]-4-methylbenzamide (XVd).** Yield 54%, mp 173–174°C. ^{1}H NMR spectrum, δ, ppm: 1.24 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.24 s (3H, 2-CH_3), 2.39 s (3H, $C\mathbf{H}_3C_6H_4$), 3.33–3.47 m (1H, 5-CH), 3.91 s (3H, MeO), 7.53 s (1H, 6-H), 7.17–7.88 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.29–7.88 d.d (4H, $MeC_6\mathbf{H}_4$, J = 8.1 Hz), 9.11 s (1H, OH), 10.95 s (1H, NH). Found, %: N 3.06, 3.19; S 7.03, 7.09. $C_{25}H_{27}NO_5S$. Calculated, %: N 3.09; S 7.07.

***N*-[4-Hydroxy-2-isopropyl-5-methyl-3-(4-methylphenylsulfonyl)phenyl]benzamide (XVIa).** Yield 48%, mp 167–168°C. ^{1}H NMR spectrum, δ, ppm: 0.90 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.21 s (3H, 5-CH_3), 2.41 s (3H, $C\mathbf{H}_3C_6H_4$), 3.58–3.72 m (1H, 2-CH), 7.27 s (1H, 6-H), 7.48–7.59 m (5H, Ph), 7.75–7.91 d.d (4H, C_6H_4, J = 8.7 Hz), 9.60 s (1H, OH), 10.66 br.s (1H, NH). Found, %: N 3.12, 3.41; S 7.27, 7.63. $C_{24}H_{25}NO_4S$. Calculated, %: N 3.31; S 7.57.

4-Chloro-*N*-[4-hydroxy-2-isopropyl-3-(4-methoxyphenylsulfonyl)-5-methylphenyl]benzamide (XVIb). ^{1}H NMR spectrum, δ, ppm: 0.94 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.21 s (3H, 5-CH_3), 3.61–3.75 m (1H, 2-CH), 3.86 s (3H, MeO), 7.27 s (1H, 6-H), 7.19–7.82 m (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.60–7.93 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.4 Hz), 9.73 s (1H, OH), 10.90 s (1H, NH).

***N*-[3-(4-Chlorophenylsulfonyl)-4-hydroxy-2-isopropyl-5-methylphenyl]-4-methoxybenzamide (XVIc).** Yield 56%, mp 188–189°C. ^{1}H NMR spectrum, δ, ppm: 0.94 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.19 s (3H, 5-CH_3), 3.82 s (3H, MeO), 3.61–3.75 m (1H, 2-CH), 7.26 s (1H, 6-H), 7.04–7.90 d.d (4H, MeO-$C_6\mathbf{H}_4$, J = 8.7 Hz), 7.74–7.89 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.4 Hz), 9.44 s (1H, OH), 10.37 br.s (1H, NH). Found, %: N 3.05, 3.17; S 6.59, 6.80. $C_{24}H_{24}ClNO_5S$. Calculated, %: N 2.96; S 6.76.

***N*-[4-Hydroxy-2-isopropyl-3-(4-methoxyphenylsulfonyl)-5-methylphenyl]-4-methylbenzamide (XVId).** ^{1}H NMR spectrum, δ, ppm: 1.05 d (6H, $\mathbf{Me}_2$CH, J = 7.2 Hz), 2.15 s (3H, 5-CH_3), 2.41 s (3H, $C\mathbf{H}_3C_6H_4$), 3.10–3.24 m (1H, 2-CH), 3.96 s (3H, MeO), 7.34 s (1H, 6-H), 7.21–7.83 d.d (4H, MeO-$C_6\mathbf{H}_4$, J = 8.4 Hz), 7.32–7.91 d.d (4H, $MeC_6\mathbf{H}_4$, J = 8.1 Hz), 8.07 s (1H, OH), 9.06 br.s (1H, NH).

***N*-[4-Hydroxy-3-(4-methoxyphenylsulfonyl)-2,5-dimethylphenyl]-*N′*-(4-methylphenylsulfonyl)benzimidamide (XVIIa).** ^{1}H NMR spectrum, δ, ppm: 2.13 s (3H, 5-CH_3), 2.21 s (3H, 2-CH_3), 2.33 s (3H, $C\mathbf{H}_3C_6H_4$), 3.85 s (3H, MeO), 7.34 br.s (1H, 6-H), 7.15–7.82 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 7.16–7.54 m (5H, Ph), 7.18–7.53 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.1 Hz), 10.17 s (1H, OH), 10.43 br.s (1H, NH).

***N*-[4-Hydroxy-3-(4-methoxyphenylsulfonyl)-2,5-dimethylphenyl]-*N′*-(4-methoxyphenylsulfonyl)-**

benzimidamide (XVIIb). ^{1}H NMR spectrum, δ, ppm: 2.13 s (3H, 5-CH_3), 2.19 s (3H, 2-CH_3), 3.79 s and 3.85 s (3H each, MeO), 6.91–7.47 d.d and 7.14–7.80 d.d (4H each, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 7.40–7.82 m (5H, Ph), 7.33 br.s (1H, 6-H), 10.07 br.s (1H, OH), 10.38 br.s (1H, NH).

***N*-[4-Hydroxy-2,5-dimethyl-3-(4-methylphenylsulfonyl)phenyl]-*N′*-(4-methoxyphenylsulfonyl)benzimidamide (XVIIc).** ^{1}H NMR spectrum, δ, ppm: 2.13 s (3H, 5-CH_3), 2.20 s (3H, 2-CH_3), 2.40 s (3H, $C\mathbf{H}_3C_6H_4$), 3.80 s (3H, MeO), 6.91–7.43 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 7.34 br.s (1H, 6-H), 7.42–7.74 m (5H, Ph), 7.48–7.73 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.1 Hz), 10.06 s (1H, OH), 10.31 br.s (1H, NH).

***N*-[4-Hydroxy-5-isopropyl-3-(4-methoxyphenylsulfonyl)-2-methylphenyl]-*N′*-(4-methylphenylsulfonyl)benzimidamide (XVIIIa).** ^{1}H NMR spectrum, δ, ppm: 1.08 d (6H, Me_2CH, J = 6.9 Hz), 2.17 s (3H, 2-CH_3), 2.33 s (3H, $C\mathbf{H}_3C_6H_4$), 3.18–3.31 m (1H, 5-CH), 3.84 s (3H, MeO), 7.40 br.s (1H, 6-H), 7.14–7.83 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.18–7.84 m (5H, Ph), 7.19–7.48 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.1 Hz), 10.08 s (1H, OH), 10.62 br.s (1H, NH).

***N*-[4-Hydroxy-5-isopropyl-3-(4-methoxyphenylsulfonyl)-2-methylphenyl]-*N′*-(4-methoxyphenylsulfonyl)benzimidamide (XVIIIb).** ^{1}H NMR spectrum, δ, ppm: 1.08 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.16 s (3H, 2-CH_3), 3.18–3.32 m (1H, 5-CH), 3.79 s and 3.85 s (3H each, MeO), 6.89–7.83 m (5H, Ph), 6.90–7.48 d.d and 7.15–7.82 d.d (4H each, C_6H_4, J = 8.4 Hz), 7.38 br.s (1H, 6-H), 10.03 s (1H, OH), 10.53 br.s (1H, NH).

***N*-[4-Hydroxy-5-isopropyl-2-methyl-3-(4-methylphenylsulfonyl)phenyl]-*N′*-(4-methoxyphenylsulfonyl)benzimidamide (XVIIIc).** ^{1}H NMR spectrum, δ, ppm: 1.08 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.15 s (3H, 2-CH_3), 2.39 s (3H, $C\mathbf{H}_3C_6H_4$), 3.16–3.30 m (1H, 5-CH), 3.79 s (3H, MeO), 6.89–7.76 m (5H, Ph), 6.90–7.44 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 7.39 br.s (1H, 6-H), 7.45– 7.76 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.1 Hz), 10.01 s (1H, OH), 10.47 br.s (1H, NH).

***N*-[4-Hydroxy-2-isopropyl-3-(4-methoxyphenylsulfonyl)-5-methylphenyl]-*N′*-(4-methylphenylsulfonyl)benzimidamide (XIXa).** ^{1}H NMR spectrum, δ, ppm: 0.88 d (6H, $\mathbf{Me}_2CH$, J = 6.6 Hz), 2.21 s (3H, 5-CH_3), 2.31 s (3H, $C\mathbf{H}_3C_6H_4$), 3.61–3.74 m (1H, 2-CH), 3.85 s (3H, MeO), 7.14–7.55 m (5H, Ph), 7.15–7.80 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 7.17–7.48 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.1 Hz), 7.37 br.s (1H, 6-H), 10.06 s (1H, OH), 10.93 s (1H, NH).

***N*-[4-Hydroxy-2-isopropyl-3-(4-methoxyphenylsulfonyl)-5-methylphenyl]-*N′*-(4-methoxyphenylsulfonyl)benzimidamide (XIXb).** Yield 45%, mp 157–158°C. ^{1}H NMR spectrum, δ, ppm: 0.88 d (6H, $\mathbf{Me}_2CH$, J = 6.6 Hz), 2.21 s (3H, 5-CH_3), 3.60–3.73 m (1H, 2-CH), 3.78 s and 3.86 s (3H, MeO), 6.86–7.46 d.d and 7.16–7.79 d.d (4H each, C_6H_4, J = 8.4 Hz), 7.22–7.52 m (5H, Ph), 7.34 br.s (1H, 6-H), 9.99 s (1H, OH), 10.92 br.s (1H, NH). Found, %: N 4.40, 4.62; S 10.56, 10.60. $C_{31}H_{32}N_2O_7S$. Calculated, %: N 4.60; S 10.53.

***N*-[4-Hydroxy-2-isopropyl-5-methyl-3-(4-methylphenylsulfonyl)phenyl]-*N′*-(4-methoxyphenylsulfonyl)benzimidamide (XIXc).** Yield 46%, mp 192–194°C. ^{1}H NMR spectrum, δ, ppm: 0.87 d (6H, $\mathbf{Me}_2CH$, J = 6.6 Hz), 2.21 s (3H, 5-CH_3), 2.41 s (3H, $C\mathbf{H}_3C_6H_4$), 3.57–3.71 m (1H, 2-CH), 3.79 s (3H, MeO), 6.86–7.43 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 7.36 br.s (1H, 6-H), 7.43–7.52 m (5H, Ph), 7.46–7.73 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.1 Hz), 9.99 br.s (1H, OH), 10.84 br.s (1H, NH). Found, %: N 4.57, 4.65; S 10.63, 10.78. $C_{31}H_{32}N_2O_6S_2$. Calculated, %: N 4.73; S 10.82.

2,5-Dimethyl-4-(4-methylphenylsulfonylamino)phenyl 4-methoxybenzenesulfonate (XXa). ^{1}H NMR spectrum, δ, ppm: 1.84 s (3H, 2-CH_3), 1.91 s (3H, 5-CH_3), 2.41 s (3H, $C\mathbf{H}_3C_6H_4$), 3.95 s (3H, MeO), 6.82 s (1H, 6-H), 7.02 s (1H, 3-H), 7.16–7.75 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.25–7.46 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.7 Hz), 8.78 s (1H, NH).

4-(4-Methoxyphenylsulfonylamino)-2,5-dimethylphenyl 4-chlorobenzenesulfonate (XXb). ^{1}H NMR spectrum, δ, ppm: 1.84 s (3H, 2-CH_3), 1.90 s (3H, 5-CH_3), 3.95 s (3H, MeO), 6.84 s (1H, 6-H), 7.05 s (1H, 3-H), 7.06–7.45 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.76–7.89 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.7 Hz), 8.69 s (1H, NH).

4-(4-Methoxyphenylsulfonylamino)-2,5-dimethylphenyl 4-methoxybenzenesulfonate (XXc). ^{1}H NMR spectrum, δ, ppm: 1.83 s (3H, 2-CH_3), 1.91 s (3H, 5-CH_3), 3.95 s (6H, MeO), 6.82 s (1H, 6-H), 7.00–7.42 d.d (4H, C_6H_4, J = 9.0 Hz), 7.03 s (1H, 3-H), 7.07–7.69 d.d (4H, C_6H_4, J = 8.7 Hz), 8.74 s (1H, NH).

2-Isopropyl-5-methyl-4-(4-methylphenylsulfonylamino)phenyl 4-methoxybenzenesulfonate (XXIa). ^{1}H NMR spectrum, δ, ppm: 1.00 d (6H, $\mathbf{Me}_2CH$, J = 6.6 Hz), 3.23–3.37 m (1H, 2-CH), 2.10 s (3H, 5-CH_3), 2.49 s (3H, $C\mathbf{H}_3C_6H_4$), 3.96 s (3H, MeO), 6.85 s (1H, 6-H), 6.90 s (1H, 3-H), 7.16–7.77 d.d (4H, $MeOC_6\mathbf{H}_4$,

J = 8.7 Hz), 7.23–7.48 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.7 Hz), 8.81 s (1H, NH).

2-Isopropyl-4-(4-methoxyphenylsulfonylamino)-5-methylphenyl 4-chlorobenzenesulfonate (XXIb). ^{1}H NMR spectrum, δ, ppm: 1.00 d (6H, $\mathbf{Me}_2$CH, J = 6.6 Hz), 2.08 s (3H, 5-CH_3), 3.21–3.35 m (1H, 2-CH), 3.95 s (3H, MeO), 6.83 s (1H, 6-H), 6.89 s (1H, 3-H), 7.00–7.42 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.70–7.86 d.d (4H, ClC_6H_4, J = 8.4 Hz), 8.65 s (1H, NH).

2-Isopropyl-4-(4-methoxyphenylsulfonylamino)-5-methylphenyl 4-methoxybenzenesulfonate (XXIc). ^{1}H NMR spectrum, δ, ppm: 0.99 d (6H, $\mathbf{Me}_2$CH, J = 6.6 Hz), 2.09 s (3H, 5-CH_3), 3.24–3.36 m (1H, 2-CH), 3.95 s (6H, MeO), 6.85 s (1H, 6-H), 6.92 s (1H, 3-H), 7.02–7.39 d.d and 7.19–7.82 d.d (4H each, C_6H_4, J = 8.7 Hz), 8.76 s (1H, NH).

5-Isopropyl-2-methyl-4-(4-methylphenylsulfonylamino)phenyl 4-methoxybenzenesulfonate (XXIIa). ^{1}H NMR spectrum, δ, ppm: 1.03 d (6H, $\mathbf{Me}_2$CH, J = 6.6 Hz), 2.02 s (3H, 2-CH_3), 2.41 s (3H, C$\mathbf{H}_3C_6H_4$), 3.23–3.36 m (1H, 5-CH), 3.95 s (3H, MeO), 6.84 s (1H, 6-H), 6.97 s (1H, 3-H), 7.19–7.82 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.47–7.76 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.4 Hz), 8.73 s (1H, NH).

5-Isopropyl-4-(4-methoxyphenylsulfonylamino)-2-methylphenyl 4-chlorobenzenesulfonate (XXIIb). ^{1}H NMR spectrum, δ, ppm: 1.02 d (6H, $\mathbf{Me}_2$CH, J = 6.6 Hz), 2.00 s (3H, 2-CH_3), 3.20–3.34 m (1H, 5-CH), 3.95 s (3H, MeO), 6.80 s (1H, 6-H), 6.92 s (1H, 3-H), 7.12–7.75 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.69–7.80 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.7 Hz), 8.62 s (1H, NH).

5-Isopropyl-4-(4-methoxyphenylsulfonylamino)-2-methylphenyl 4-methoxybenzenesulfonate (XXIIc). ^{1}H NMR spectrum, δ, ppm: 1.02 d (6H, $\mathbf{Me}_2$CH, J = 6.6 Hz), 2.02 s (3H, 2-CH_3), 3.22–3.35 m (1H, 5-CH), 3.95 s (6H, MeO), 6.83 s (1H, 6-H), 6.95 s (1H, 3-H), 7.14–7.72 d.d (4H, C_6H_4, J = 8.7 Hz), 7.20–7.81 d.d (4H, C_6H_4, J = 9.0 Hz), 8.70 s (1H, NH).

4-Benzoylamino-2,5-dimethylphenyl 4-methylbenzenesulfonate (XXIIIa). ^{1}H NMR spectrum, δ, ppm: 1.97 s (3H, 2-CH_3), 2.16 s (3H, 5-CH_3), 2.45 s (3H, C$\mathbf{H}_3C_6H_4$), 6.93 s (1H, 6-H), 7.27 s (1H, 3-H), 7.45–7.60 m (5H, Ph), 7.80–7.96 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.7 Hz), 9.86 s (1H, NH).

4-(4-Chlorobenzoylamino)-2,5-dimethylphenyl 4-methoxybenzenesulfonate (XXIIIb). ^{1}H NMR spectrum, δ, ppm: 1.97 s (3H, 2-CH_3), 2.15 s (3H, 5-CH_3), 3.89 s (3H, MeO), 6.93 s (1H, 6-H), 7.19 s (1H, 3-H), 7.24–7.83 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.61–7.97 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.1 Hz), 9.95 s (1H, NH).

4-(4-Methoxybenzoylamino)-2,5-dimethylphenyl 4-chlorobenzenesulfonate (XXIIIc). ^{1}H NMR spectrum, δ, ppm: 1.99 s (3H, 2-CH_3), 2.16 s (3H, 5-CH_3), 3.76 s (3H, MeO), 6.93 s (1H, 6-H), 7.27 s (1H, 3-H), 7.08–7.65 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.79–7.95 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.7 Hz), 9.92 s (1H, NH).

2,5-Dimethyl-4-(4-methylbenzoylamino)phenyl 4-methoxybenzenesulfonate (XXIIId). ^{1}H NMR spectrum, δ, ppm: 2.01 s (3H, 2-CH_3), 2.23 s (3H, 5-CH_3), 2.40 s (3H, 4-C$\mathbf{H}_3C_6H_4$), 3.94 s (3H, MeO), 6.93 s (1H, 6-H), 7.34 s (1H, 3-H), 7.15–7.83 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.31–7.90 d.d (4H, $MeC_6\mathbf{H}_4$, J = 8.4 Hz), 8.96 s (1H, NH).

4-Benzoylamino-2-isopropyl-5-methylphenyl 4-methylbenzenesulfonate (XXIVa). ^{1}H NMR spectrum, δ, ppm: 0.99 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.15 s (3H, 5-CH_3), 2.44 s (3H, C$\mathbf{H}_3C_6H_4$), 2.88–3.02 m (1H, 5-CH), 6.93 s (1H, 6-H), 7.32 s (1H, 3-H), 7.40–7.60 m (5H, Ph), 7.81–7.97 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 9.0 Hz), 9.90 s (1H, NH).

4-(4-Chlorobenzoylamino)-2-isopropyl-5-methylphenyl 4-methoxybenzenesulfonate (XXIVb). ^{1}H NMR spectrum, δ, ppm: 1.00 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.14 s (3H, 5-CH_3), 2.91–3.04 m (1H, 2-CH), 3.89 s (3H, MeO), 6.94 s (1H, 6-H), 7.21–7.89 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.31 s (1H, 3-H), 7.60–7.99 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.7 Hz), 9.97 s (1H, NH).

2-Isopropyl-4-(4-methoxybenzoylamino)-5-methylphenyl 4-chlorobenzenesulfonate (XXIVc). ^{1}H NMR spectrum, δ, ppm: 1.00 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.15 s (3H, 5-CH_3), 2.79–2.93 m (1H, 2-CH), 3.84 s (3H, MeO), 6.94 s (1H, 6-H), 7.03–7.67 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.32 s (1H, 3-H), 7.75–7.96 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.7 Hz), 9.79 s (1H, NH).

2-Isopropyl-5-methyl-4-(4-methylbenzoylamino)-phenyl 4-methoxybenzenesulfonate (XXIVd). ^{1}H NMR spectrum, δ, ppm: 1.05 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.26 s (3H, 5-CH_3), 2.41 s (3H, C$\mathbf{H}_3C_6H_4$), 3.00–3.13 m (1H, 2-CH), 3.95 s (3H, MeO), 6.96 s (1H, 6-H), 7.05 s (1H, 3-H), 7.18–7.86 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.34–7.92 d.d (4H, $MeC_6\mathbf{H}_4$, J = 8.4 Hz), 9.04 s (1H, NH).

4-Benzoylamino-5-isopropyl-2-methylphenyl 4-methylbenzenesulfonate (XXVa). ^{1}H NMR spectrum, δ, ppm: 0.94 d (6H, $\mathbf{Me}_2$CH, J = 6.9 Hz), 2.10 s (3H, 2-CH_3), 2.98–3.11 m (1H, 5-CH), 2.44 s (3H, C$\mathbf{H}_3C_6H_4$), 6.59 s (1H, 6-H), 7.19 s (1H, 3-H), 7.42–

7.64 m (5H, Ph), 7.78–7.94 d.d (4H, C_6H_4, J = 8.4 Hz), 9.86 s (1H, NH).

4-(4-Chlorobenzoylamino)-5-isopropyl-2-methylphenyl 4-methoxybenzenesulfonate (XXVb). ^{1}H NMR spectrum, δ, ppm: 0.95 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.11 s (3H, 2-CH_3), 2.96–3.10 m (1H, 5-CH), 3.88 s (3H, MeO), 6.61 s (1H, 6-H), 7.19 s (1H, 3-H), 7.22–7.83 d.d (4H, MeOC_6**H**$_4$, J = 9.0 Hz), 7.60–7.97 d.d (4H, ClC_6**H**$_4$, J = 8.7 Hz), 9.95 s (1H, NH).

5-Isopropyl-4-(4-methoxybenzoylamino)-2-methylphenyl 4-chlorobenzenesulfonate (XXVc). ^{1}H NMR spectrum, δ, ppm: 0.87 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.13 s (3H, 2-CH_3), 2.98–3.12 m (1H, 5-CH), 3.83 s (3H, MeO), 6.60 s (1H, 6-H), 7.05–7.50 d.d (4H, MeOC_6**H**$_4$, J = 8.7 Hz), 7.20 s (1H, 3-H), 7.80–7.93 d.d (4H, ClC_6**H**$_4$, J = 8.74 Hz), 9.69 s (1H, NH).

5-Isopropyl-2-methyl-4-(4-methylbenzoylamino)-phenyl 4-methoxybenzenesulfonate (XXVd). ^{1}H NMR spectrum, δ, ppm: 1.13 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.15 s (3H, 2-CH_3), 2.23 s (3H, C**H**$_3C_6H_4$), 2.91–3.05 m (1H, 5-CH), 3.92 s (3H, MeO), 6.81 s (1H, 6-H), 6.97 s (1H, 3-H), 7.16–8.07 d.d (4H, CH_3-C_6**H**$_4$, J = 8.4 Hz), 7.26–7.88 d.d (4H, MeOC_6**H**$_4$, J = 8.7 Hz), 8.64 s (1H, NH).

2,5-Dimethyl-4-[(4-methylphenylsulfonylimino)-(phenyl)methylamino]phenyl 4-methoxybenzenesulfonate (XXVIa). ^{1}H NMR spectrum, δ, ppm: 1.86 s (3H, 2-CH_3), 2.13 s (3H, 5-CH_3), 2.33 s (3H, C**H**$_3$-C_6H_4), 3.88 s (3H, MeO), 6.93 s (1H, 6-H), 7.16 s (1H, 3-H), 7.17–7.79 d.d (4H, MeOC_6**H**$_4$, J = 8.7 Hz), 7.25–7.58 d.d (4H, CH_3C_6**H**$_4$, J = 8.1 Hz), 7.48–7.72 m (5H, Ph), 10.21 br.s (1H, NH).

4-[(4-Methoxyphenylsulfonylimino)(phenyl)-methylamino]-2,5-dimethylphenyl 4-methoxybenzenesulfonate (XXVIb). ^{1}H NMR spectrum, δ, ppm: 1.88 s (3H, 2-CH_3), 2.11 s (3H, 5-CH_3), 3.78 s and 3.88 s (3H each, MeO), 6.92 s (1H, 6-H), 6.93–7.38 d.d (4H, MeOC_6**H**$_4$, J = 8.1 Hz), 7.16 s (1H, 3-H), 7.17–7.79 d.d (4H, MeOC_6**H**$_4$, J = 8.4 Hz), 7.51–7.70 m (5H, Ph), 10.14 br.s (1H, NH).

4-[(4-Methoxyphenylsulfonylimino)(phenyl)-methylamino]-2,5-dimethylphenyl 4-methylbenzenesulfonate (XXVIc). ^{1}H NMR spectrum, δ, ppm: 1.86 s (3H, 2-CH_3), 2.10 s (3H, 5-CH_3), 2.44 s (3H, C**H**$_3C_6H_4$), 3.78 s (3H, MeO), 6.92 s (1H, 6-H), 6.94–7.36 d.d (4H, MeOC_6**H**$_4$, J = 8.4 Hz), 7.11 s (1H, 3-H), 7.31–7.70 d.d (4H, CH_3C_6**H**$_4$, J = 8.1 Hz), 7.54–7.69 m (5H, Ph), 10.16 s (1H, NH).

2-Isopropyl-5-methyl-4-[(4-methylphenylsulfonylimino)(phenyl)methylamino]phenyl 4-methoxybenzenesulfonate (XXVIIa). ^{1}H NMR spectrum, δ, ppm: 0.89 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.13 s (3H, 5-CH_3), 2.33 s (3H, C**H**$_3C_6H_4$), 2.79–2.93 m (1H, 2-CH), 3.87 s (3H, MeO), 6.92 s (1H, 6-H), 7.12 s (1H, 3-H), 7.17–7.82 d.d (4H, MeOC_6**H**$_4$, J = 8.4 Hz), 7.24–7.61 d.d (4H, CH_3C_6**H**$_4$, J = 8.4 Hz), 7.32–7.56 m (5H, Ph), 10.13 s (1H, NH).

2-Isopropyl-4-[(4-methoxyphenylsulfonylimino)-(phenyl)methylamino]-5-methylphenyl 4-methoxybenzenesulfonate (XXVIIb). ^{1}H NMR spectrum, δ, ppm: 0.89 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.12 s (3H, 5-CH_3), 2.78–2.91 m (1H, 2-CH), 3.78 s and 3.88 s (3H each, MeO), 6.92 s (1H, 6-H), 6.93–7.40 d.d (4H, MeOC_6**H**$_4$, J = 8.4 Hz), 7.12 s (1H, 3-H), 7.17–7.79 d.d (4H, MeOC_6**H**$_4$, J = 8.7 Hz), 7.28–7.64 m (5H, Ph), 10.14 s (1H, NH).

2-Isopropyl-4-[(4-methoxyphenylsulfonylimino)-(phenyl)methylamino]-5-methylphenyl 4-methylbenzenesulfonate (XXVIIc). ^{1}H NMR spectrum, δ, ppm: 0.89 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.12 s (3H, 5-CH_3), 2.43 s (3H, C**H**$_3C_6H_4$), 2.79–2.92 m (1H, 2-CH), 3.77 s (3H, MeO), 6.93–7.41 d.d (4H, MeO-C_6**H**$_4$, J = 8.4 Hz), 6.94 s (1H, 6-H), 7.12 s (1H, 3-H), 7.29–7.65 m (5H, Ph), 7.30–7.72 d.d (4H, CH_3C_6**H**$_4$, J = 8.1 Hz), 10.09 s (1H, NH).

5-Isopropyl-2-methyl-4-[(4-methylphenylsulfonylimino)(phenyl)methylamino]phenyl 4-methoxybenzenesulfonate (XXVIIIa). ^{1}H NMR spectrum, δ, ppm: 0.91 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.05 s (3H, 2-CH_3), 2.31 s (3H, C**H**$_3C_6H_4$), 2.87–3.00 m (1H, 5-CH), 3.87 s (3H, MeO), 6.58 s (1H, 6-H), 7.13 s (1H, 3-H), 7.17–7.77 d.d (4H, MeOC_6**H**$_4$, J = 8.4 Hz), 7.24–7.59 d.d (4H, CH_3C_6**H**$_4$, J = 8.1 Hz), 7.31–7.56 m (5H, Ph), 10.26 s (1H, NH).

5-Isopropyl-4-[(4-methoxyphenylsulfonylimino)-(phenyl)methylamino]-2-methylphenyl 4-methoxybenzenesulfonate (XXVIIIb). ^{1}H NMR spectrum, δ, ppm: 0.91 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.05 s (3H, 2-CH_3), 2.86–3.00 m (1H, 5-CH), 3.77 s and 3.87 s (3H each, MeO), 6.56 s (1H, 6-H), 6.91–7.41 d.d (4H, MeOC_6**H**$_4$, J = 8.7 Hz), 7.14 s (1H, 3-H), 7.18–7.77 d.d (4H, MeOC_6**H**$_4$, J = 8.4 Hz), 7.21–7.54 m (5H, Ph), 10.21 s (1H, NH).

5-Isopropyl-4-[(4-methoxyphenylsulfonylimino)-(phenyl)methylamino]-2-methylphenyl 4-methylbenzenesulfonate (XXVIIIc). ^{1}H NMR spectrum, δ, ppm: 0.90 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.04 s (3H, 2-CH_3), 2.44 s (3H, C**H**$_3C_6H_4$), 2.86–2.99 m (1H, 5-CH), 3.77 s (3H, MeO), 6.56 s (1H, 6-H), 6.91–7.41 d.d (4H, MeOC_6**H**$_4$, J = 8.4 Hz), 7.14 s (1H, 3-H),

7.20–7.50 m (5H, Ph), 7.34–7.70 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.1 Hz), 10.19 br.s (1H, NH).

***N*-(4-Hydroxy-2,5-dimethylphenyl)-4-methoxy-*N*-(4-methylphenylsulfonyl)benzenesulfonamide (XXIXa).** ^{1}H NMR spectrum, δ, ppm: 1.84 s (3H, 5-CH_3), 1.94 s (3H, 2-CH_3), 2.49 s (3H, $C\mathbf{H}_3C_6H_4$), 3.96 s (3H, MeO), 6.52 s (1H, 3-H), 6.72 s (1H, 6-H), 7.19–7.43 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.7 Hz), 7.27–7.84 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 8.33 s (1H, OH).

4-Chloro-*N*-(4-hydroxy-2,5-dimethylphenyl)-*N*-(4-methoxyphenylsulfonyl)benzenesulfonamide (XXIXb). ^{1}H NMR spectrum, δ, ppm: 1.84 s (3H, 5-CH_3), 1.95 s (3H, 2-CH_3), 3.96 s (3H, MeO), 6.55 s (1H, 3-H), 6.74 s (1H, 6-H), 7.08–7.49 d.d (4H, MeO-$C_6\mathbf{H}_4$, J = 8.7 Hz), 7.72–7.87 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.4 Hz), 8.19 s (1H, OH).

***N*-(4-Hydroxy-2,5-dimethylphenyl)-4-methoxy-*N*-(4-methoxyphenylsulfonyl)benzenesulfonamide (XXIXc).** ^{1}H NMR spectrum, δ, ppm: 1.83 s (3H, 5-CH_3), 1.94 s (3H, 2-CH_3), 3.96 s (6H, MeO), 6.52 s (1H, 3-H), 6.71 s (1H, 6-H), 7.23–7.81 d.d (8H, C_6H_4, J = 8.7 Hz), 8.29 s (1H, OH).

***N*-(4-Hydroxy-5-isopropyl-2-methylphenyl)-4-methoxy-*N*-(4-methylphenylsulfonyl)benzenesulfonamide (XXXa).** ^{1}H NMR spectrum, δ, ppm: 0.84 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 1.99 s (3H, 2-CH_3), 2.49 s (3H, $C\mathbf{H}_3C_6H_4$), 2.84–2.98 m (1H, 5-CH), 3.96 s (3H, MeO), 6.33 s (1H, 3-H), 6.75 s (1H, 6-H), 7.20–7.35 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.7 Hz), 7.31–7.90 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 8.30 s (1H, OH).

4-Chloro-*N*-(4-hydroxy-5-isopropyl-2-methylphenyl)-*N*-(4-methoxyphenylsulfonyl)benzenesulfonamide (XXXb). ^{1}H NMR spectrum, δ, ppm: 0.85 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.00 s (3H, 2-CH_3), 2.82–2.95 m (1H, 5-CH), 3.96 s (3H, MeO), 6.38 s (1H, 3-H), 6.77 s (1H, 6-H), 7.15–7.43 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 7.72–7.91 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.4 Hz), 8.18 s (1H, OH).

***N*-(4-Hydroxy-5-isopropyl-2-methylphenyl)-4-methoxy-*N*-(4-methoxyphenylsulfonyl)benzenesulfonamide (XXXc).** ^{1}H NMR spectrum, δ, ppm: 0.84 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.00 s (3H, 2-CH_3), 2.84–2.97 m (1H, 5-CH), 3.96 s (6H, MeO), 6.36 s (1H, 3-H), 6.74 s (1H, 6-H), 7.28–7.86 d.d (8H, 4-$MeOC_6\mathbf{H}_4$, J = 8.7 Hz), 8.27 s (1H, OH).

***N*-(4-Hydroxy-2-isopropyl-5-methylphenyl)-4-methoxy-*N*-(4-methylphenylsulfonyl)benzenesulfonamide (XXXIa).** ^{1}H NMR spectrum, δ, ppm: 0.77 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.02 s (3H, 5-CH_3), 2.49 s (3H, $C\mathbf{H}_3C_6H_4$), 2.94–3.08 m (1H, 2-CH), 3.96 s (3H, MeO), 6.36 s (1H, 3-H), 6.64 s (1H, 6-H), 7.16–7.74 d.d (4H, $CH_3C_6\mathbf{H}_4$, J = 8.7 Hz), 7.26–7.49 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 8.4 Hz), 8.40 s (1H, OH).

4-Chloro-*N*-(4-hydroxy-2-isopropyl-5-methylphenyl)-*N*-(4-methoxyphenylsulfonyl)benzenesulfonamide (XXXIb). ^{1}H NMR spectrum, δ, ppm: 0.76 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.02 s (3H, 5-CH_3), 2.92–3.05 m (1H, 2-CH), 3.96 s (3H, MeO), 6.35 s (1H, 3-H), 6.60 s (1H, 6-H), 7.05–7.41 d.d (4H, MeO-$C_6\mathbf{H}_4$, J = 8.7 Hz), 7.67–7.83 d.d (4H, ClC_6H_4, J = 8.4 Hz), 8.23 s (1H, OH).

***N*-(4-Hydroxy-2-isopropyl-5-methylphenyl)-4-methoxy-*N*-(4-methoxyphenylsulfonyl)benzenesulfonamide (XXXIc).** ^{1}H NMR spectrum, δ, ppm: 0.77 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.01 s (3H, 5-CH_3), 2.94–3.07 m (1H, 2-CH), 3.96 s (6H, MeO), 6.34 s (1H, 3-H), 6.62 s (1H, 6-H), 7.15–7.79 d.d (8H, C_6H_4, J = 8.7 Hz), 8.34 s (1H, OH).

***N*-(4-Hydroxy-2,5-dimethylphenyl)-*N*-(4-methylphenylsulfonyl)benzamide (XXXIIa).** ^{1}H NMR spectrum, δ, ppm: 1.91 s (3H, 5-CH_3), 2.03 s (3H, 2-CH_3), 2.34 s (3H, $C\mathbf{H}_3C_6H_4$), 6.49 s (1H, 3-H), 7.05 s (1H, 6-H), 7.20–7.35 m (5H, Ph), 7.43–7.88 d.d (4H, C_6H_4, J = 8.7 Hz), 9.65 s (1H, OH).

4-Chloro-*N*-(4-hydroxy-2,5-dimethylphenyl)-*N*-(4-methoxyphenylsulfonyl)benzamide (XXXIIb). ^{1}H NMR spectrum, δ, ppm: 1.87 s (3H, 5-CH_3), 2.03 s (3H, 2-CH_3), 3.89 s (3H, MeO), 6.51 s (1H, 3-H), 7.03 s (1H, 6-H), 7.18–7.90 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.67–7.82 d.d (4H, $ClC_6\mathbf{H}_4$, J = 8.4 Hz), 9.70 s (1H, OH).

***N*-(4-Hydroxy-2,5-dimethylphenyl)-*N*-(4-methoxyphenylsulfonyl)-4-methylbenzamide (XXXIId).** ^{1}H NMR spectrum, δ, ppm: 8.68 s (1H, OH), 7.14–7.98 d.d (4H, $MeOC_6\mathbf{H}_4$, J = 9.0 Hz), 7.03–7.46 d.d (4H, $MeC_6\mathbf{H}_4$, J = 8.7 Hz), 7.01 s (1H, 6-H), 6.59 s (1H, 3-H), 3.94 s (3H, MeO), 2.24 s (3H, $C\mathbf{H}_3C_6H_4$), 2.10 s (3H, 2-CH_3), 1.96 s (3H, 5-CH_3).

***N*-(4-Hydroxy-5-isopropyl-2-methylphenyl)-*N*-(4-methylphenylsulfonyl)benzamide (XXXIIIa).** ^{1}H NMR spectrum, δ, ppm: 1.08 d (6H, $\mathbf{Me}_2CH$, J = 6.9 Hz), 2.00 s (3H, 2-CH_3), 2.34 s (3H, $C\mathbf{H}_3C_6H_4$), 2.96–3.10 m (1H, 5-CH), 6.52 s (1H, 3-H), 6.76 s (1H, 6-H), 7.20–7.37 m (5H, Ph), 7.43–7.84 d.d (4H, CH_3-$C_6\mathbf{H}_4$, J = 8.7 Hz), 9.60 s (1H, OH).

4-Chloro-*N*-(4-hydroxy-5-isopropyl-2-methylphenyl)-*N*-(4-methoxyphenylsulfonyl)benzamide (XXXIIIb). ^{1}H NMR spectrum, δ, ppm: 1.08 d (6H,

Me$_2$CH, J = 6.9 Hz), 1.98 s (3H, 2-CH_3), 2.97–3.11 m (1H, 5-CH), 3.80 s (3H, MeO), 6.54 s (1H, 3-H), 6.75 s (1H, 6-H), 7.27–7.81 d.d (4H, MeOC_6**H**$_4$, J = 8.7 Hz), 7.64–7.85 d.d (4H, ClC_6H_4, J = 8.4 Hz), 9.64 s (1H, OH).

***N*-(4-Hydroxy-5-isopropyl-2-methylphenyl)-*N*-(4-methoxyphenylsulfonyl)-4-methylbenzamide (XXXIIId).** ^{1}H NMR spectrum, δ, ppm: 1.20 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.09 s (3H, 2-CH_3), 2.23 s (3H, C**H**$_3$C$_6$H$_4$), 3.09–3.23 m (1H, 5-CH), 3.95 s (3H, MeO), 6.63 s (1H, 3-H), 6.84 s (1H, 6-H), 7.20–7.35 d.d (4H, MeC$_6$**H**$_4$, J = 8.4 Hz), 7.31–7.96 d.d (4H, MeOC$_6$**H**$_4$, J = 8.7 Hz), 8.69 s (1H, OH).

4-Chloro-*N*-[3-(4-methoxyphenylsulfonyl)-2,5-dimethyl-4-oxocyclohexa-2,5-dien-1-ylidene]benzamide (XXXIV). Yield 74%, mp 175–177°C. ^{1}H NMR spectrum, δ, ppm: 1.88 s (3H, 5-CH_3), 2.92 s (3H, 2-CH_3), 3.89 s (3H, MeO), 6.67 s (1H, 6-H), 7.03–8.04 d.d (4H, MeOC_6**H**$_4$, J = 9.0 Hz), 7.48–7.81 d.d (4H, ClC_6H_4, J = 8.4 Hz). Found, %: N 3.02, 3.46; S 7.01, 7.34. $C_{22}H_{18}ClNO_5S$. Calculated, %: N 3.16; S 7.22.

***N*-[3-(4-Chlorophenylsulfonyl)-5-isopropyl-2-methyl-4-oxocyclohexa-2,5-dien-1-ylidene]-4-methoxybenzamide (XXXV).** Yield 68%, mp 93–95°C. ^{1}H NMR spectrum, δ, ppm: 0.92 d (6H, **Me**$_2$CH, J = 6.9 Hz), 2.79–2.93 m (1H, 5-CH), 2.93 s (3H, 2-CH_3), 3.89 s (3H, MeO), 6.61 s (1H, 6-H), 6.98–8.03 d.d (4H, MeOC_6**H**$_4$, J = 9.0 Hz), 7.53–7.82 d.d (4H, ClC_6H_4, J = 8.7 Hz). Found, %: N 2.64, 2.95; S 6.72, 6.90. $C_{24}H_{22}ClNO_5S$. Calculated, %: N 2.97; S 6.79.

4-Chloro-*N*-[2-isopropyl-3-(4-methoxyphenylsulfonyl)-5-methyl-4-oxocyclohexa-2,5-dien-1-ylidene]-benzamide (XXXVI). Yield 66%, mp 142–143°C. ^{1}H NMR spectrum, δ, ppm: 1.58 d (6H, **Me**$_2$CH, J = 6.9 Hz), 1.85 s (3H, 5-CH_3), 3.89 s (3H, MeO), 4.76–4.90 m (1H, 2-CH), 6.54 s (1H, 6-H), 7.03–8.03 d.d (4H, MeOC_6**H**$_4$, J = 9.0 Hz), 7.50–7.79 d.d (4H, ClC_6H_4, J = 8.4 Hz). Found, %: N 2.73, 3.08; S 6.57, 6.86. $C_{24}H_{22}ClNO_5S$. Calculated, %: N 2.97; S 6.79.

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