

Synthesis of 4-Substituted Chlorophthalazines, Dihydrobenzoazepinediones, 2-Pyrazolylbenzoic Acid, and 2- Pyrazolylbenzohydrazide via 3-Substituted 3-Hydroxyisoindolin-1-ones

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NMR Spectra

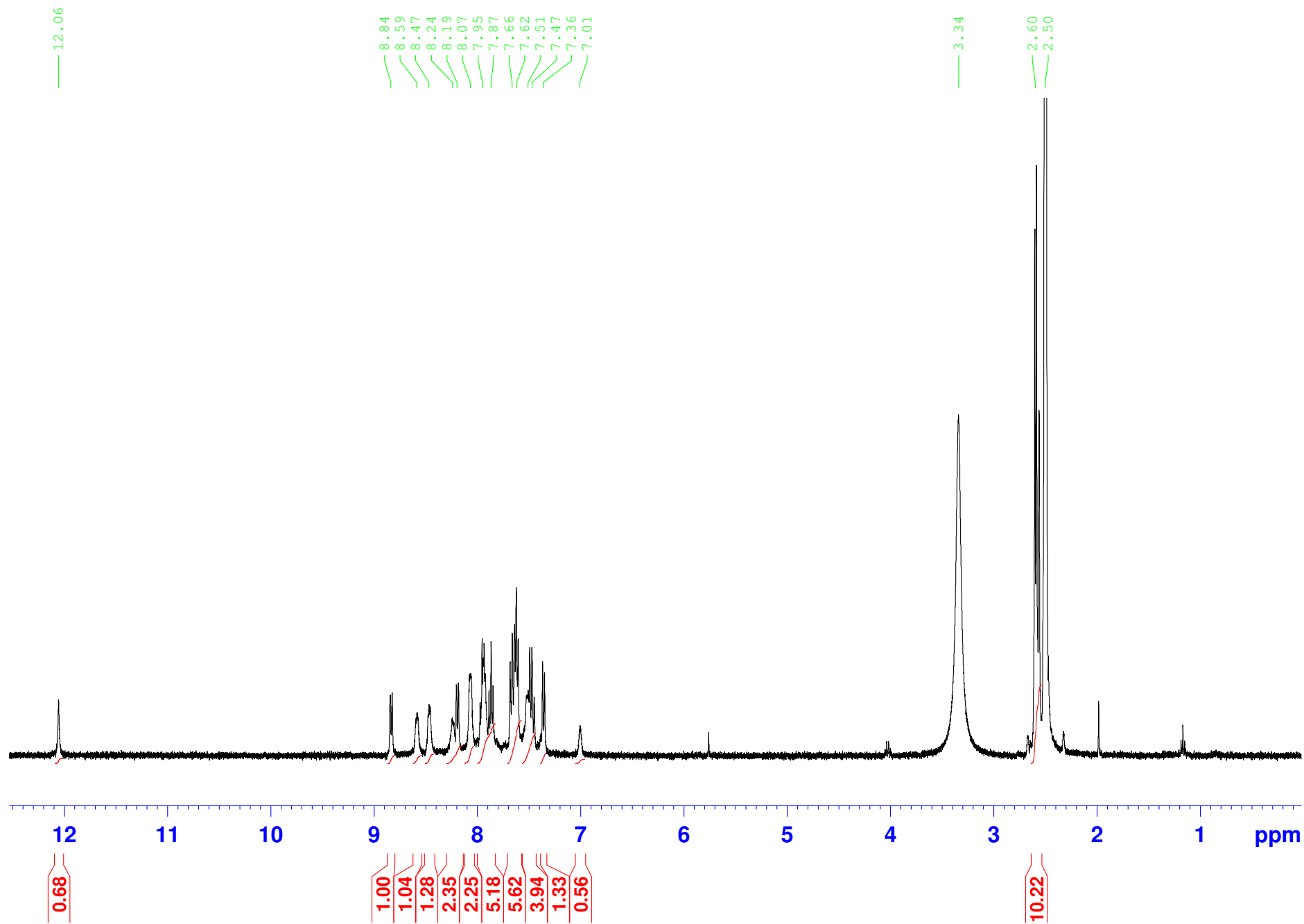
Compound Name	Cmpd#	Page
1-Chloro-4-(6-methylpyridin-2-yl)phthalazine	1b	5
1-Chloro-4-(5-methylpyridin-2-yl)phthalazine	1c	6
1-Chloro-4-(4-methylpyridin-2-yl)phthalazine	1d	7
1-Chloro-4-(6-methylpyridin-3-yl)phthalazine	1e	8
1-Chloro-4-(5-chloropyridin-2-yl)phthalazine	1f	9
1-Chloro-4-(6-methoxypyridin-2-yl)phthalazine	1g	10
1-Chloro-4-(4-methylthiophen-2-yl)phthalazine	1h	11
1-Chloro-4-(3-methylthiophen-2-yl)phthalazine	1i	12
1-Chloro-4-(5-methylthiophen-2-yl)phthalazine	1j	13
1-Chloro-4-(5-ethylthiophen-2-yl)phthalazine	1k	14
1-(Benzo[b]thiophen-2-yl)-4-chlorophthalazine	1l	15
2-(4-Chlorophthalazin-1-yl)-5-methylthiazole	1m	16
1-Chloro-4-(4-methylthiazol-2-yl)phthalazine	1n	17
1-Chloro-4-(4,5-dimethylthiazol-2-yl)phthalazine	1o	18

1-Chloro-4-(4-chlorophenyl)phthalazine	1p	19
1-(4-tert-Butylphenyl)-4-chlorophthalazine	1q	20
1-Chloro-4-m-tolylphthalazine	1r	21
1-Chloro-4-(3-(trifluoromethyl)phenyl)phthalazine	1s	22
1-Chloro-4-(4-chloro-3-methoxyphenyl)phthalazine	1t	23
1-Chloro-4-isopropylphthalazine	1u	24
1-Chloro-4-cyclohexylphthalazine	1v	25
3,3-Bis(6-methylpyridin-2-yl)isobenzofuran-1(3H)-one	6b	26
4-(6-Methylpyridin-2-yl)phthalazin-1(2H)-one	7b	27
4-(5-Methylpyridin-2-yl)phthalazin-1(2H)-one	7c	28
4-(4-Methylpyridin-2-yl)phthalazin-1(2H)-one	7d	29
4-(6-Methylpyridin-3-yl)phthalazin-1(2H)-one	7e	30
4-(5-Chloropyridin-2-yl)phthalazin-1(2H)-one	7f	31
4-(6-Methoxypyridin-2-yl)phthalazin-1(2H)-one	7g	32
4-(4-Methylthiophen-2-yl)phthalazin-1(2H)-one	7h	33
4-(3-Methylthiophen-2-yl)phthalazin-1(2H)-one	7i	34
4-(5-Methylthiophen-2-yl)phthalazin-1(2H)-one	7j	35
4-(5-Ethylthiophen-2-yl)phthalazin-1(2H)-one	7k	36
4-(Benzo[b]thiophen-2-yl)phthalazin-1(2H)-one	7l	37
4-(5-Methylthiazol-2-yl)phthalazin-1(2H)-one	7m	38
4-(4-Methylthiazol-2-yl)phthalazin-1(2H)-one	7n	39
4-(4,5-dimethylthiazol-2-yl)phthalazin-1(2H)-one	7o	40
4-(4-Chlorophenyl)phthalazin-1(2H)-one	7p	41
4-(4-tert-Butylphenyl)phthalazin-1(2H)-one	7q	42
4-m-Tolylphthalazin-1(2H)-one	7r	43
4-(3-(Trifluoromethyl)phenyl)phthalazin-1(2H)-one	7s	44
4-(4-Chloro-3-methoxyphenyl)phthalazin-1(2H)-one	7t	45
4-Isopropylphthalazin-1(2H)-one	7u	46
4-Cyclohexylphthalazin-1(2H)-one	7v	47
2-(Dimethylamino)isoindoline-1,3-dione	8a	48
2-(Pyrrolidin-1-yl)isoindoline-1,3-dione	8b	49

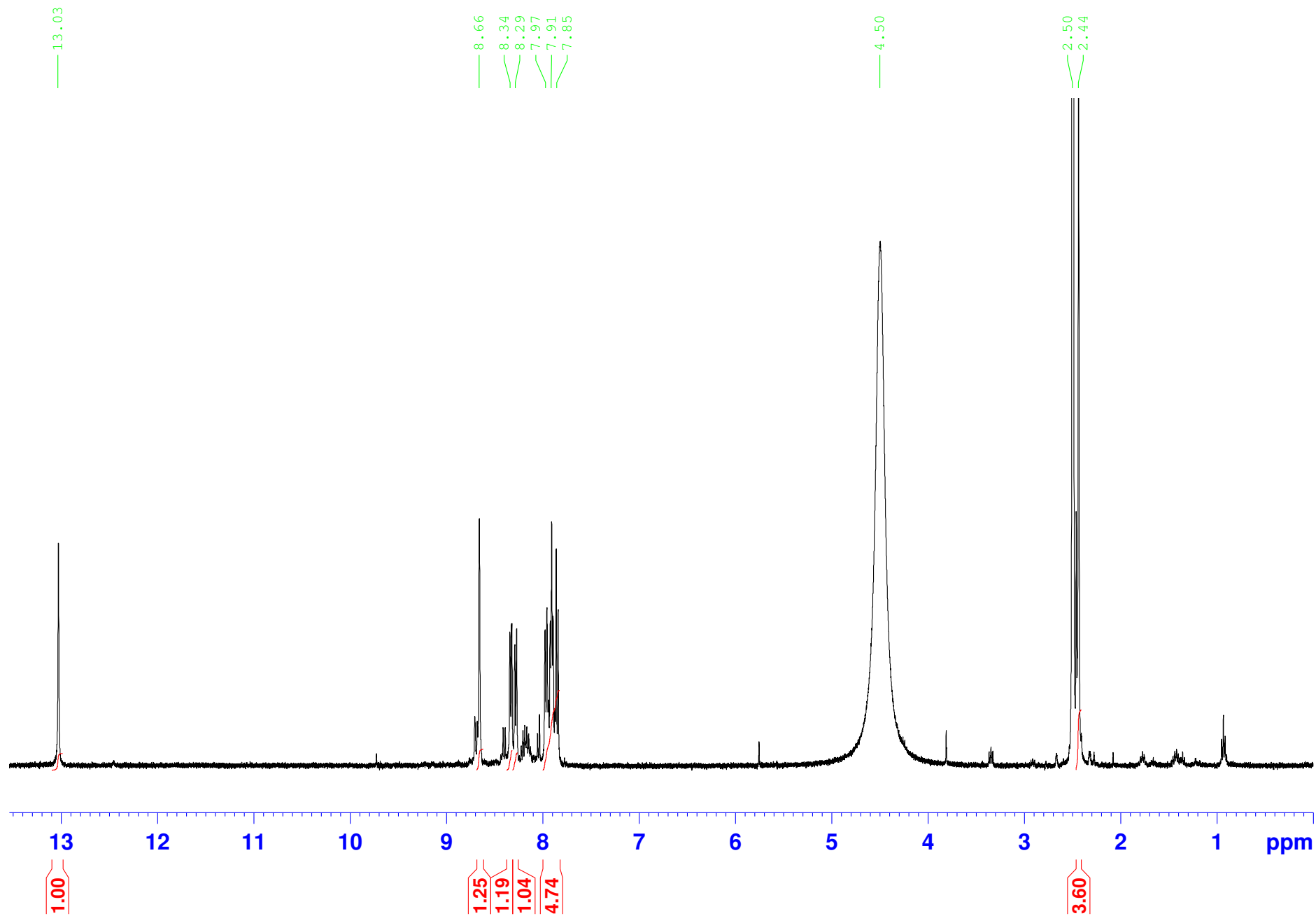
2-Methoxyisoindoline-1,3-dione	8c	50
2-Isopropylisoindoline-1,3-dione	8e	51
2-(Dimethylamino)-4,5,6,7-tetrahydro-2H-isoindole-1,3-dione	8f	52
1-(Dimethylamino)-3,4-dimethyl-1H-pyrrole-2,5-dione	8g	53
2-(Dimethylamino)-3-hydroxy-3-(6-methylpyridin-2-yl)isoindolin-1-one	9b	54
3-Hydroxy-3-(6-methylpyridin-2-yl)-2-(pyrrolidin-1-yl)isoindolin-1-one	9c	55
3-Hydroxy-2-methoxy-3-(6-methylpyridin-2-yl)isoindolin-1-one	9d	56
3-Hydroxy-2-methyl-3-(6-methylpyridin-2-yl)isoindolin-1-one	9e	57
3-Hydroxy-2-isopropyl-3-(6-methylpyridin-2-yl)isoindolin-1-one	9f	58
3-Benzyl-2-(dimethylamino)-3-hydroxy-2,3,4,5,6,7-hexahydroisoindol-1-one	9g	59
1-(Dimethylamino)-5-hydroxy-3,4-dimethyl-5-phenyl-1H-pyrrol-2(5H)-one	9h	60
2-(Dimethylamino)-3-hydroxy-3-(5-methylpyridin-2-yl)isoindolin-1-one	9i	61
2-(Dimethylamino)-3-hydroxy-3-(4-methylpyridin-2-yl)isoindolin-1-one	9j	62
2-(Dimethylamino)-3-hydroxy-3-(6-methylpyridin-3-yl)isoindolin-1-one	9k	63
3-(5-Chloropyridin-2-yl)-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9l	64
2-(Dimethylamino)-3-hydroxy-3-(6-methoxypyridin-2-yl)isoindolin-1-one	9m	65
2-(Dimethylamino)-3-hydroxy-3-(5-methylthiophen-2-yl)isoindolin-1-one	9p	66
2-(Dimethylamino)-3-(5-ethylthiophen-2-yl)-3-hydroxyisoindolin-1-one	9q	67
3-(Benzo[b]thiophen-2-yl)-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9r	68
2-(Dimethylamino)-3-hydroxy-3-(5-methylthiazol-2-yl)isoindolin-1-one	9s	69
2-(Dimethylamino)-3-hydroxy-3-(4-methylthiazol-2-yl)isoindolin-1-one	9t	70
2-(Dimethylamino)-3-(4,5-dimethylthiazol-2-yl)-3-hydroxyisoindolin-1-one	9u	71
3-(4-Chlorophenyl)-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9v	72
3-(4-tert-Butylphenyl)-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9w	73
2-(Dimethylamino)-3-hydroxy-3-m-tolylisoindolin-1-one	9x	74
2-(Dimethylamino)-3-hydroxy-3-(3-(trifluoromethyl)phenyl)isoindolin-1-one	9y	75
3-(4-Chloro-3-methoxyphenyl)-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9z	76
2-(Dimethylamino)-3-hydroxy-3-isopropylisoindolin-1-one	9aa	77
3-Benzyl-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9ab	78
3-Cyclopropyl-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9ac	79
3-Cyclohexyl-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9ad	80

2-(Dimethylamino)-3-hydroxy-3-(phenylethynyl)isoindolin-1-one	9ae	81
2-(Dimethylamino)-3-hydroxy-3-(pyridin-2-ylethynyl)isoindolin-1-one	9af	82
2-(Dimethylamino)-3-hydroxy-3-((3-hydroxyphenyl)ethynyl)isoindolin-1-one	9ag	83
2-(Dimethylamino)-3-hydroxy-3-((trimethylsilyl)ethynyl)isoindolin-1-one	9ah	84
2-(Dimethylamino)-3-ethynyl-3-hydroxyisoindolin-1-one	9ah'	85
2-(Dimethylamino)-3-hydroxy-3-((triisopropylsilyl)ethynyl)isoindolin-1-one	9ai	86
2-(Dimethylamino)-3-(hex-1-ynyl)-3-hydroxyisoindolin-1-one	9aj	87
2-(Dimethylamino)-3-hydroxy-3-(4-hydroxybut-1-ynyl)isoindolin-1-one	9ak	88
2-(Dimethylamino)-3-(3,3-dimethylbut-1-ynyl)-3-hydroxyisoindolin-1-one	9al	89
3-(Cyclopropylethynyl)-2-(dimethylamino)-3-hydroxyisoindolin-1-one	9am	90
3-Hydroxy-3-(6-methylpyridin-2-yl)isobenzofuran-1(3H)-one and 2-(2-methylpicolinoyl)benzoic acid	10a	91
2-(Dimethylamino)-3,4-dihydro-1H-benzo[c]azepine-1,5(2H)-dione	15a	92
2-(Dimethylamino)-4-methyl-3,4-dihydro-2H-benzo[c]azepine-1,5-dione	15b	93
2-(Dimethylamino)-4-phenyl-3,4-dihydro-1H-benzo[c]azepine-1,5(2H)-dione	15c	94
2-(5-Phenyl-1H-pyrazol-3-yl)benzoic acid hydrochloride	16a	95
2-(5-Butyl-1H-pyrazol-3-yl)benzoic acid hydrochloride	16b	96
2-(5-Butyl-1H-pyrazol-3-yl)benzoic acid hydrochloride	16c	97
2-(5-tert-Butyl-1H-pyrazol-3-yl)benzoic acid hydrochloride	16d	98
N',N'-Dimethyl-2-(1-methyl-5-phenyl-1H-pyrazol-3-yl)benzohydrazide	17a	99
2-(5-(3-Hydroxyphenyl)-1-methyl-1H-pyrazol-3-yl)-N',N'-dimethylbenzohydrazide	17b	100
2-(5-Butyl-1-methyl-1H-pyrazol-3-yl)-N',N'-dimethylbenzohydrazide	17c	101
2-(5-Cyclopropyl-1-methyl-1H-pyrazol-3-yl)-N',N'-dimethylbenzohydrazide	17d	102
2-(5-tert-Butyl-1-methyl-1H-pyrazol-3-yl)-N',N'-dimethylbenzohydrazide	17e	103
2-(1-Butyl-5-phenyl-1H-pyrazol-3-yl)-N',N'-dimethylbenzohydrazide	17f	104
2-(5-Cyclopropyl-1-isobutyl-1H-pyrazol-3-yl)-N',N'-dimethylbenzohydrazide	17g	105

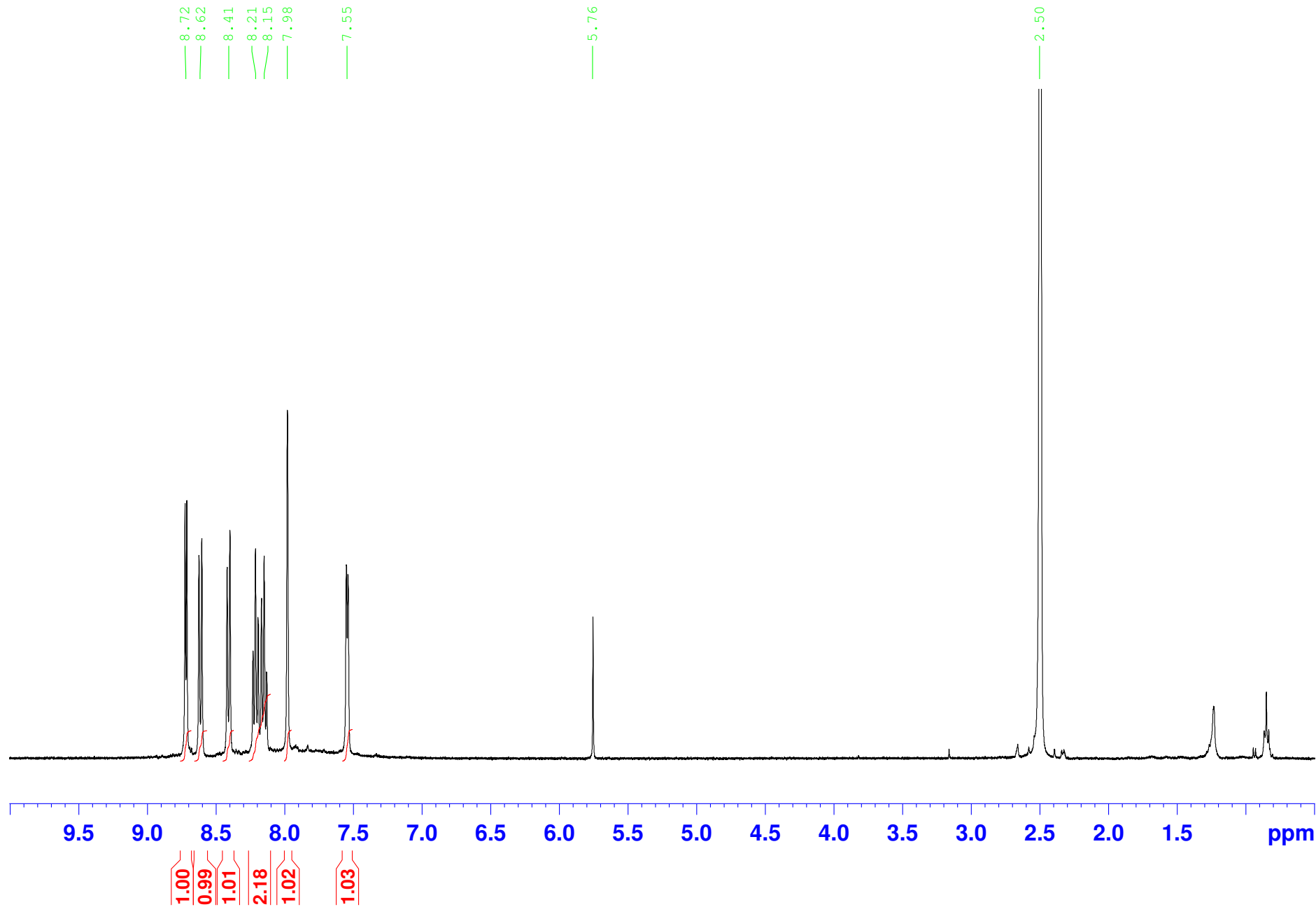
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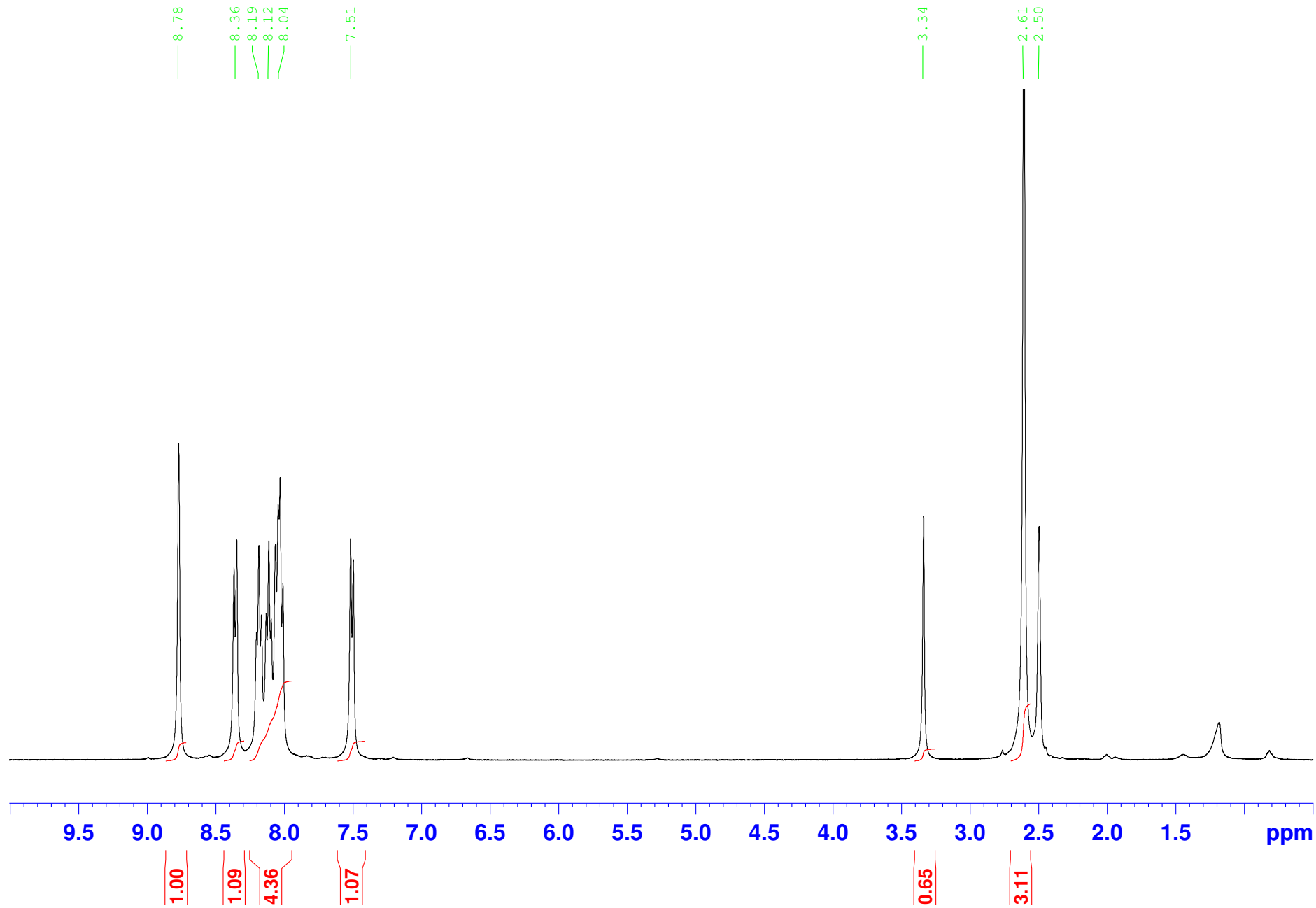
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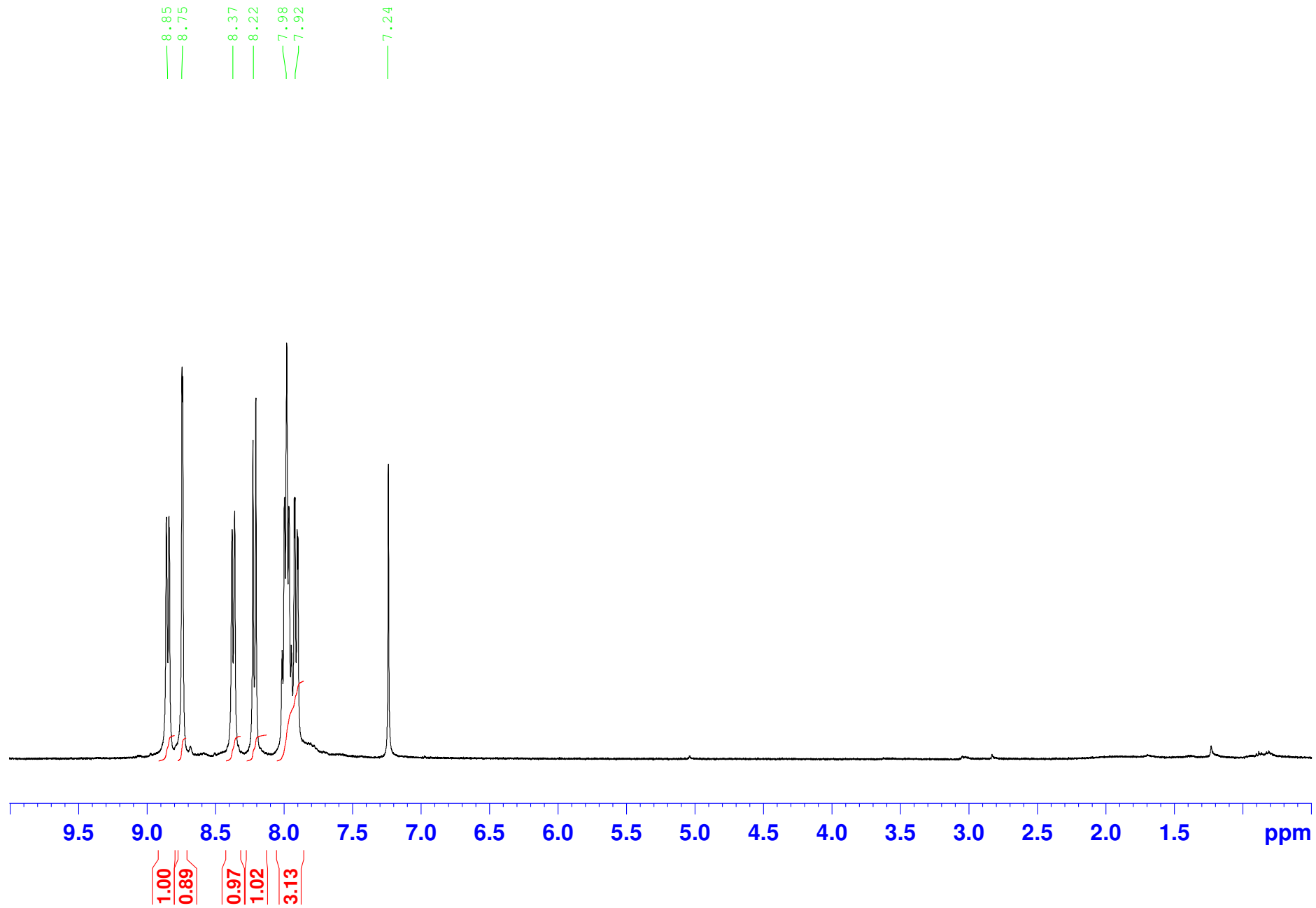
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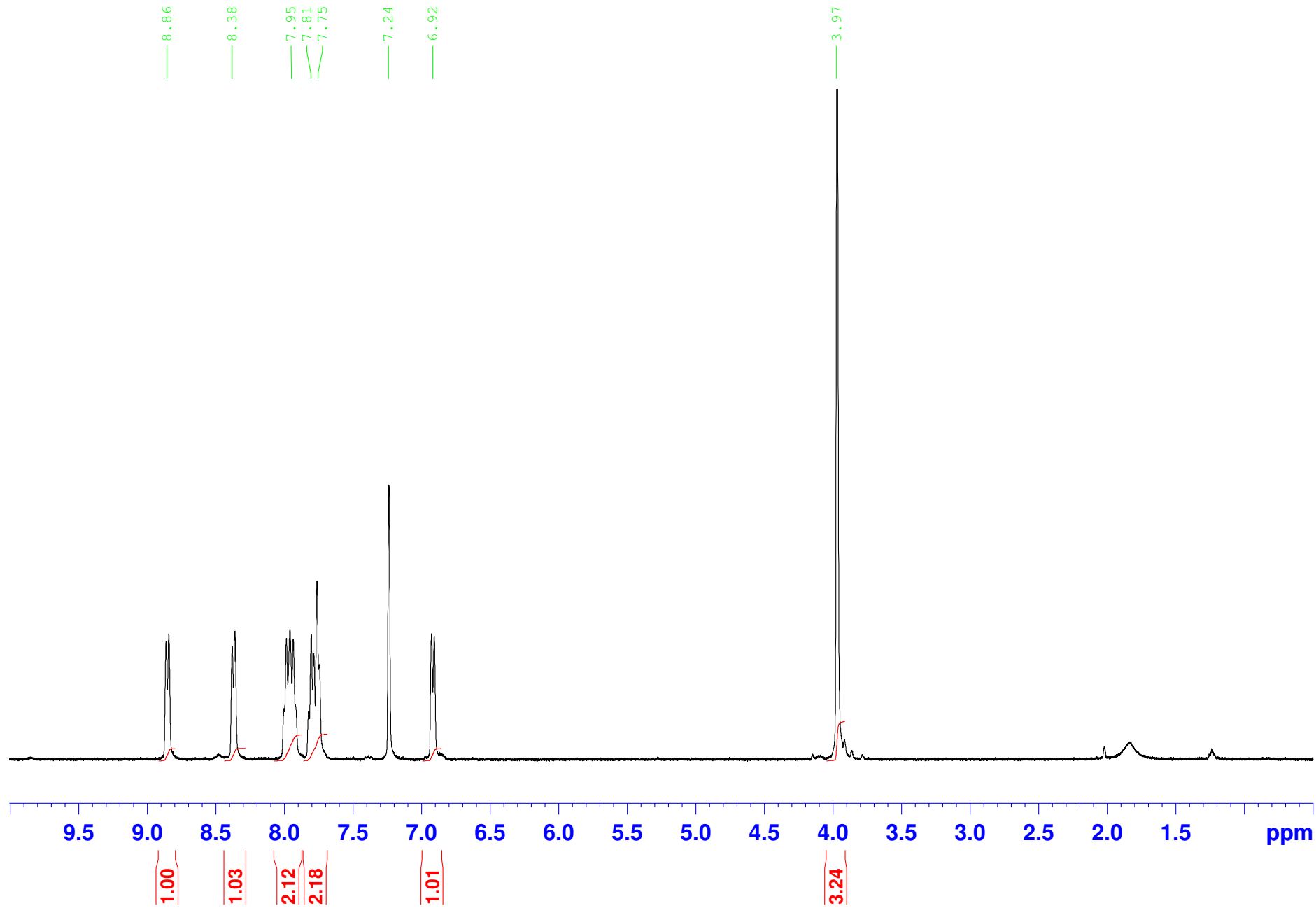
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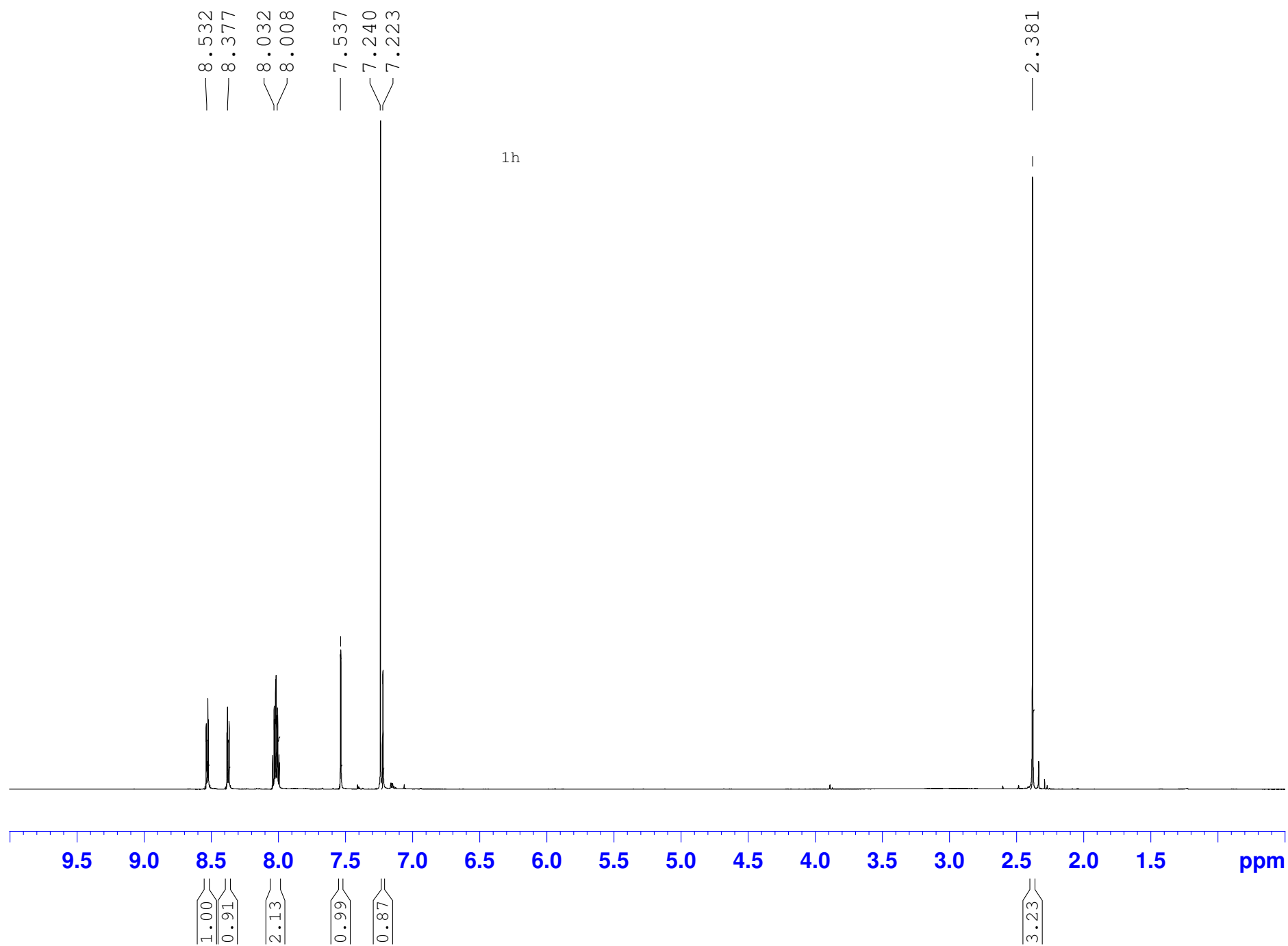


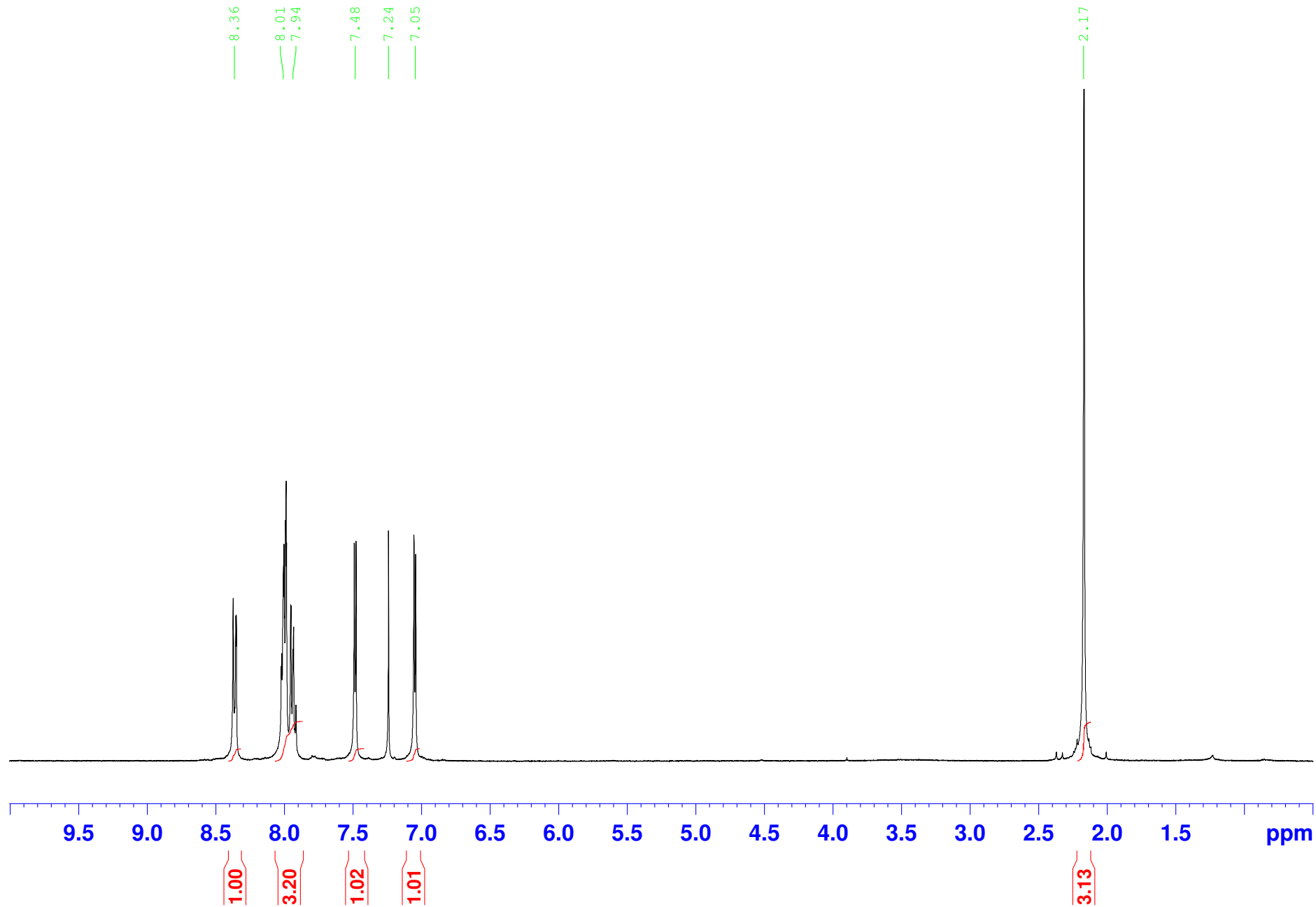
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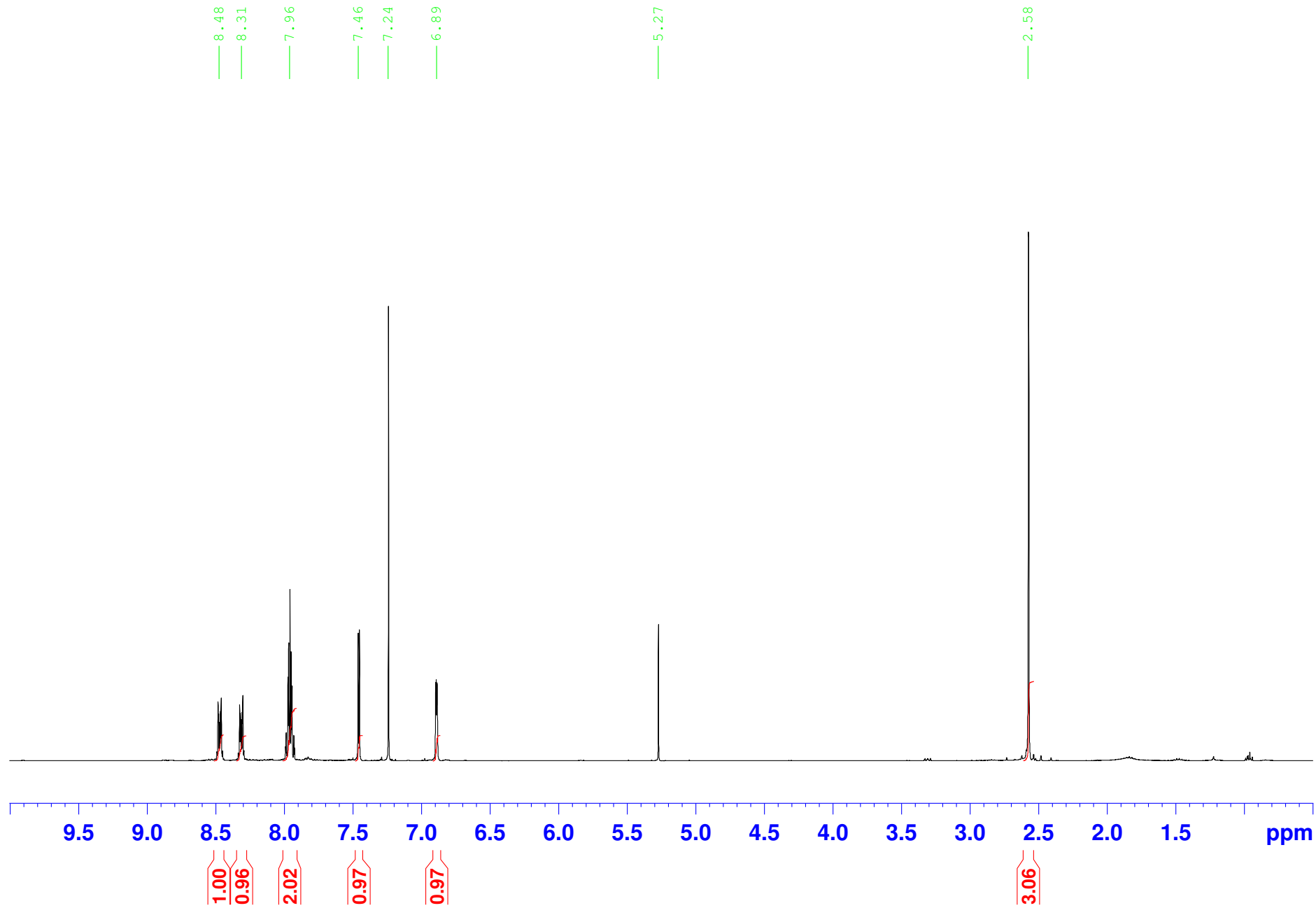
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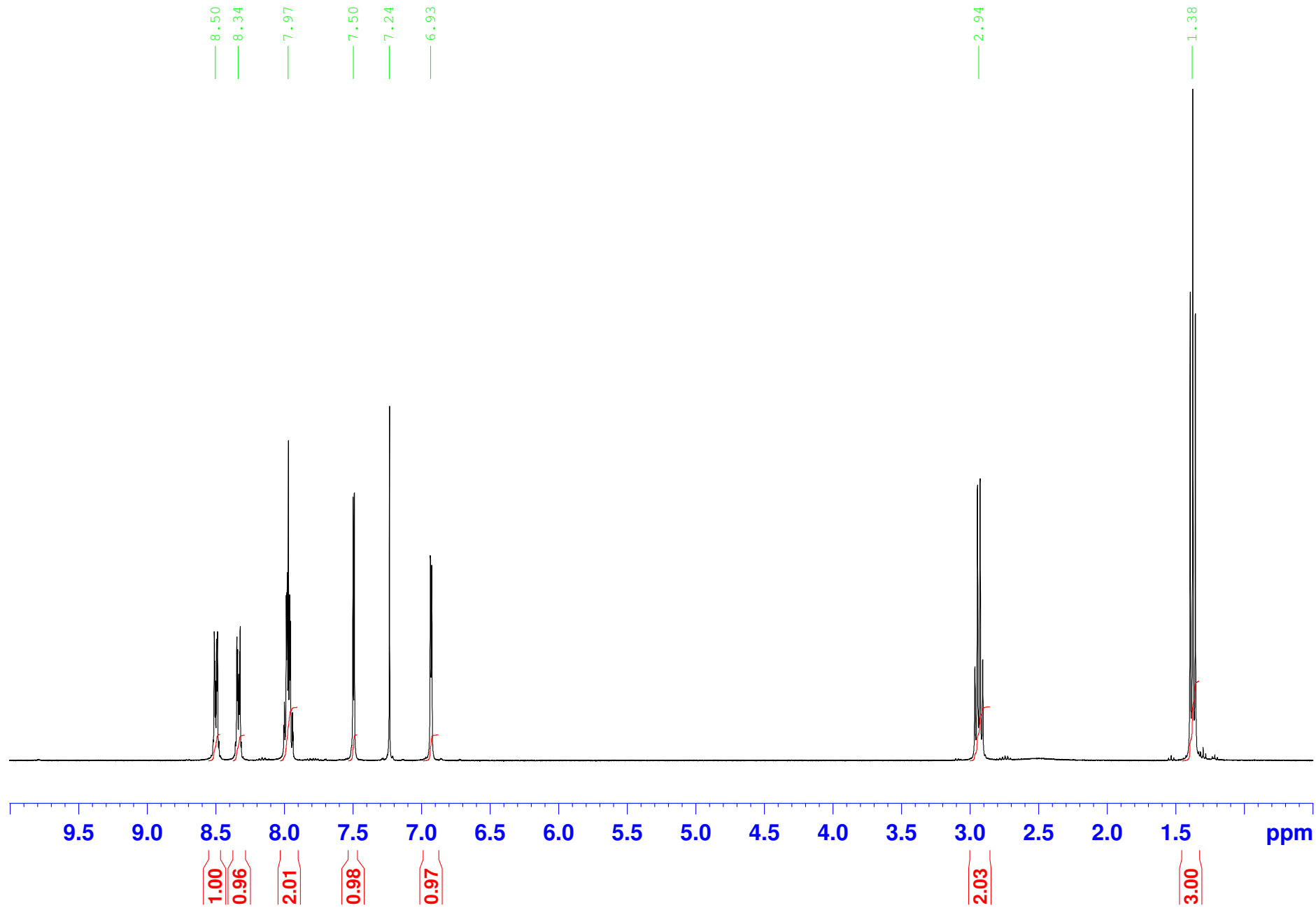


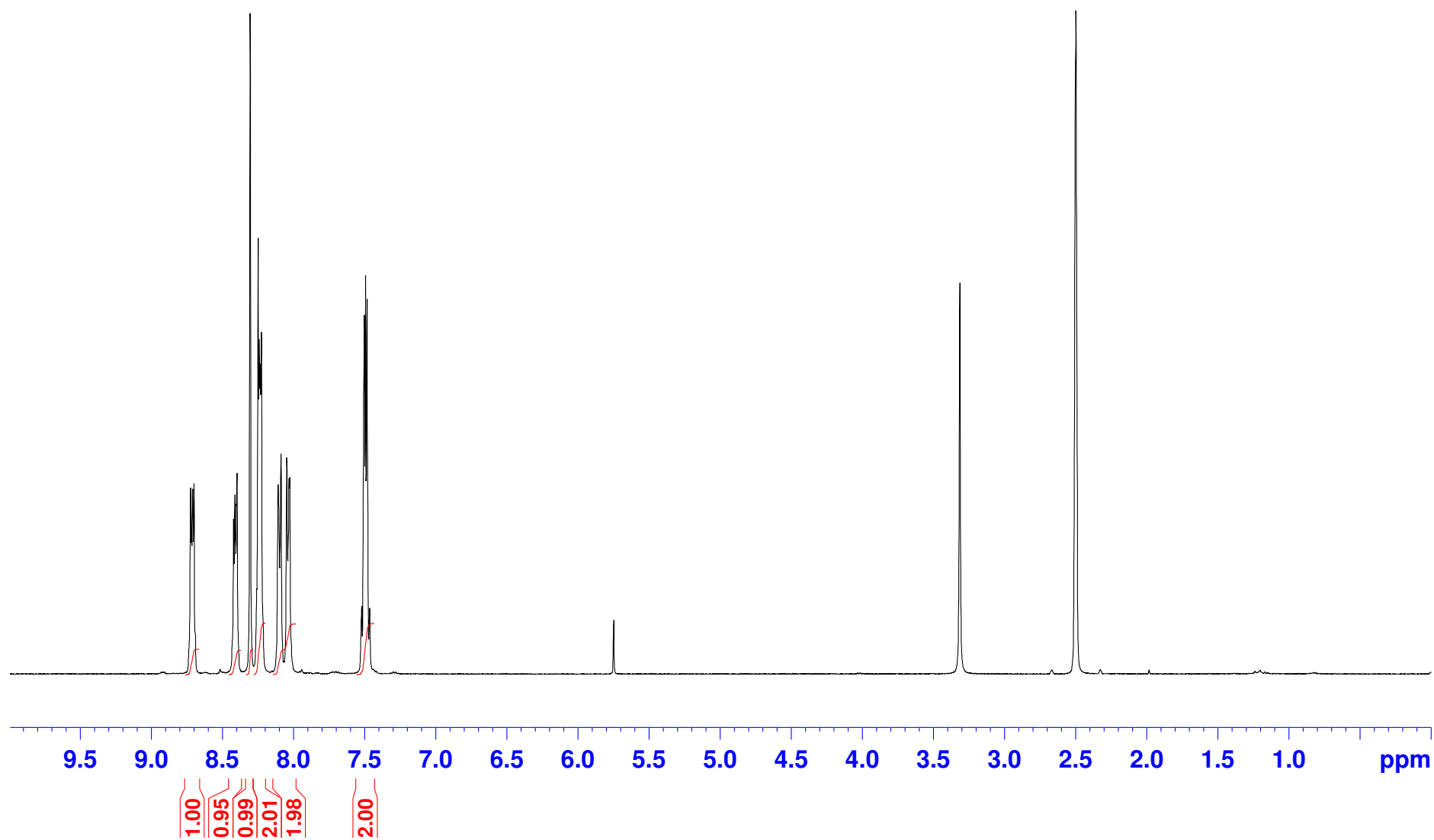


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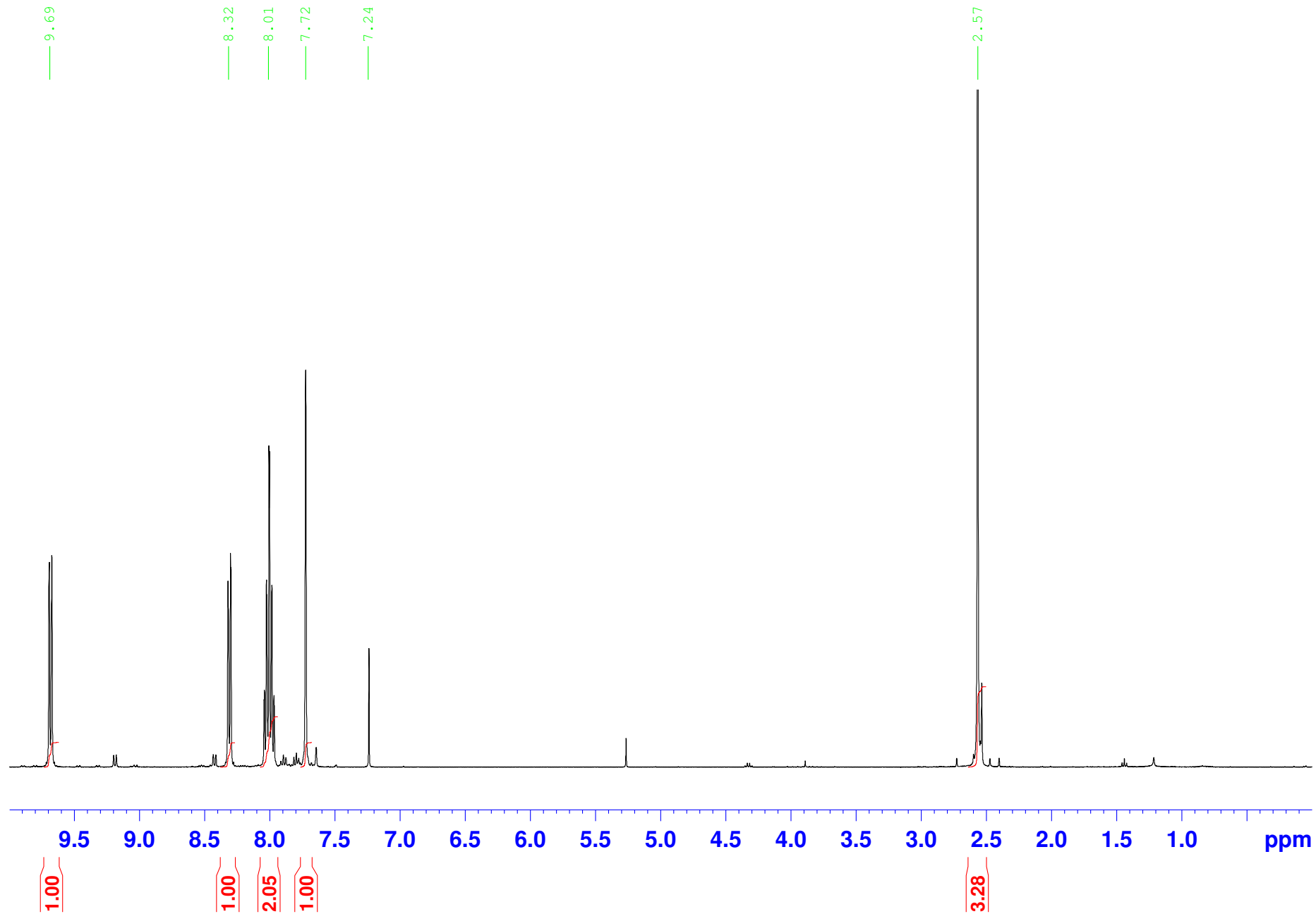


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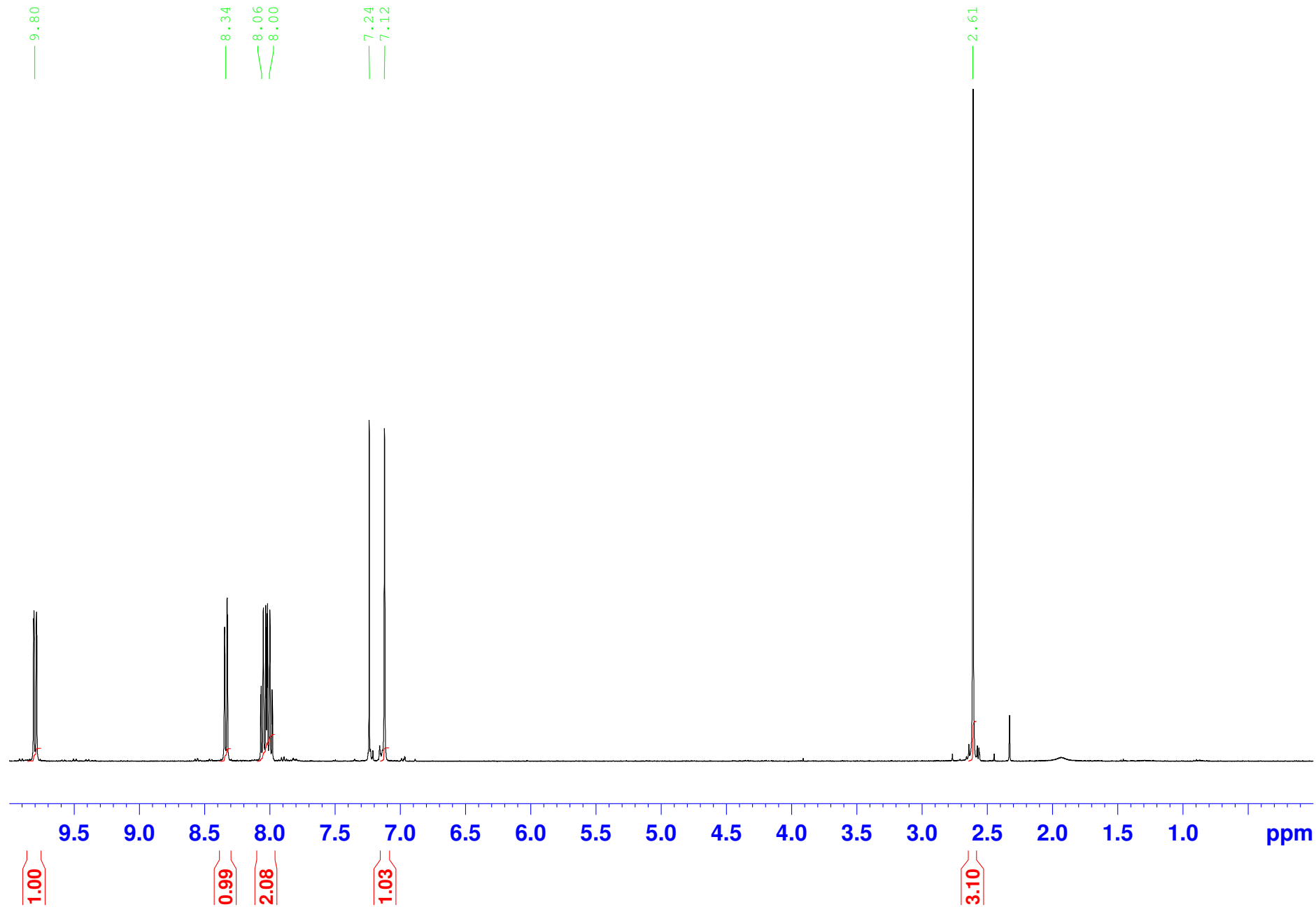




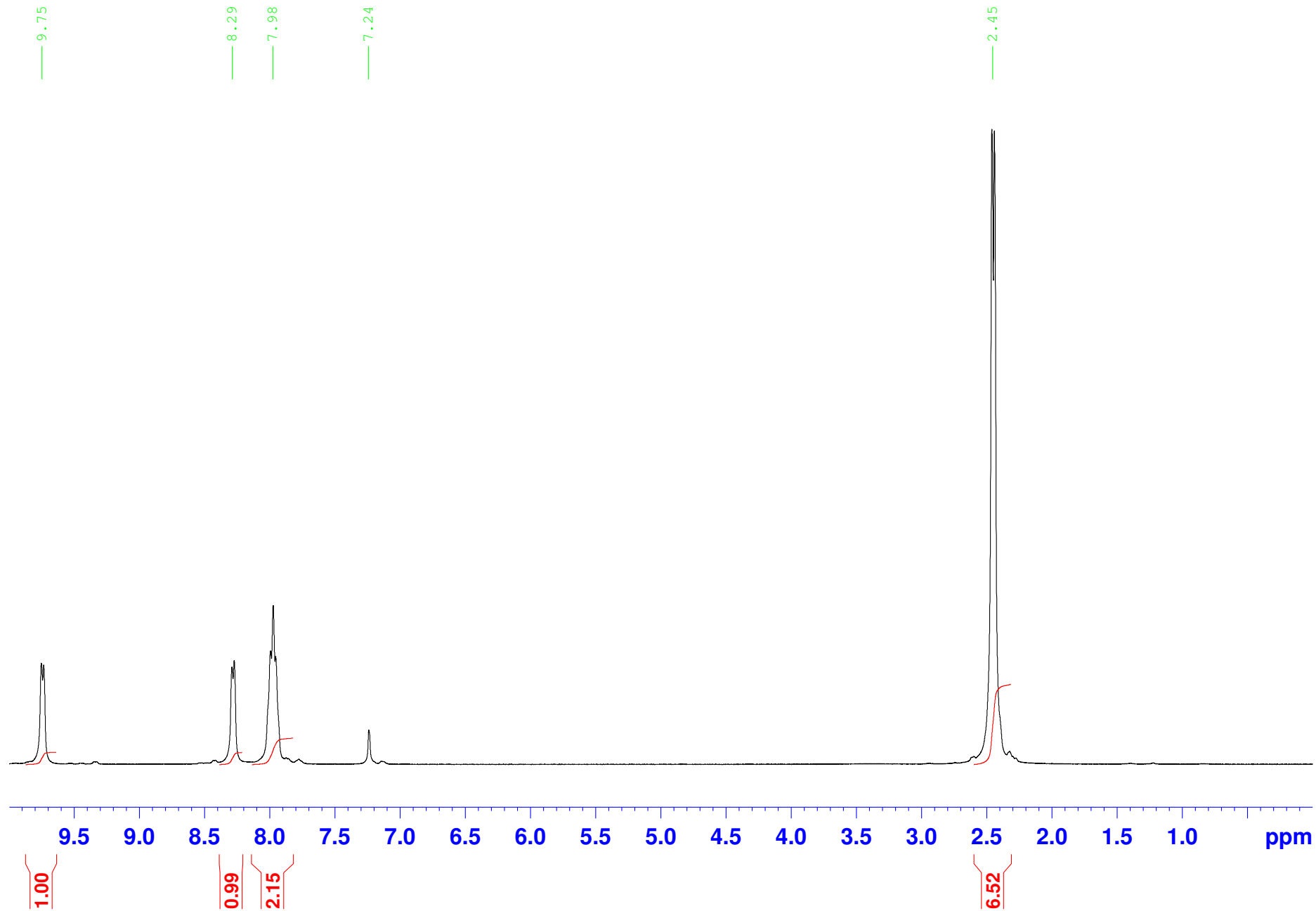
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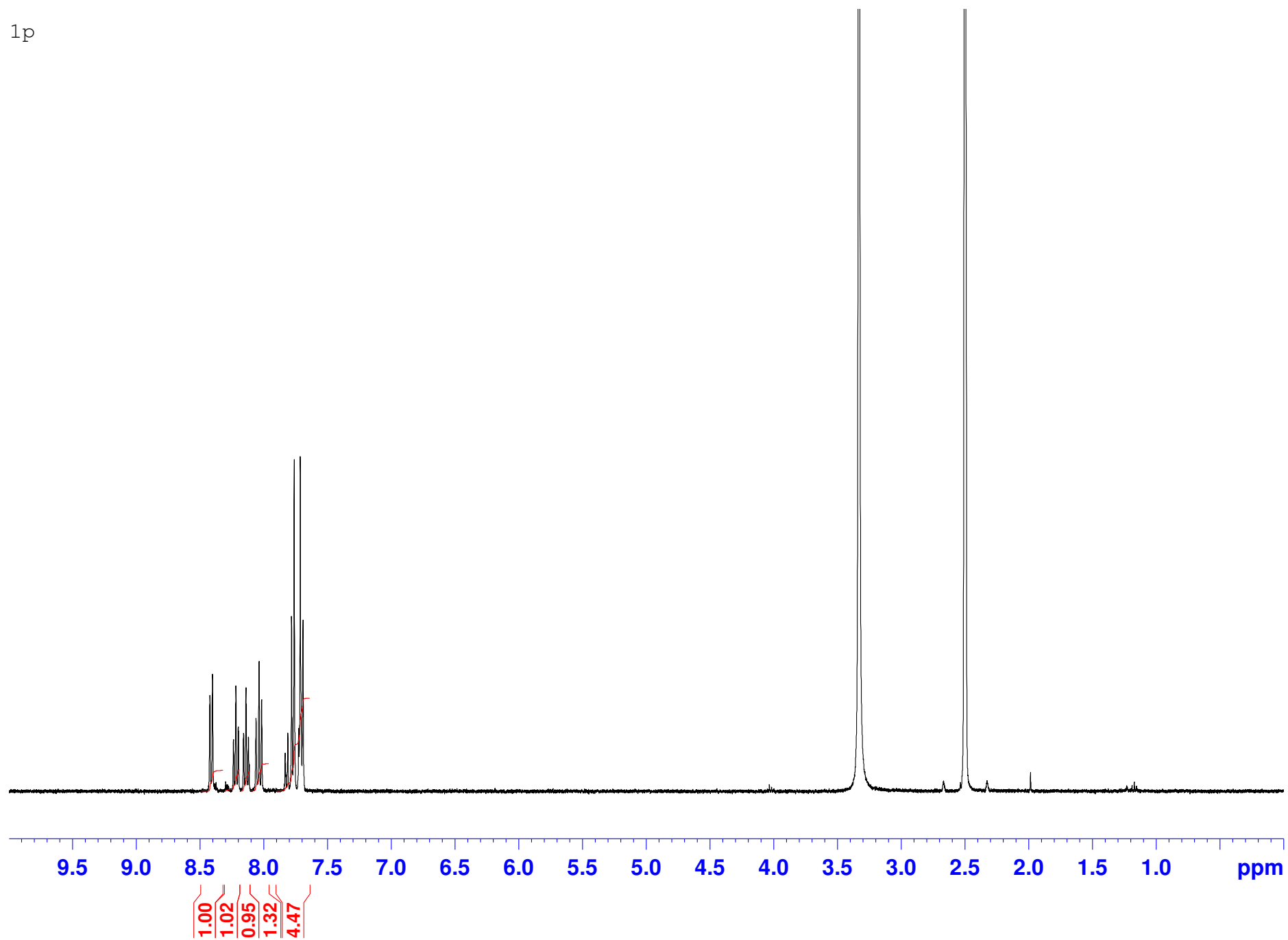
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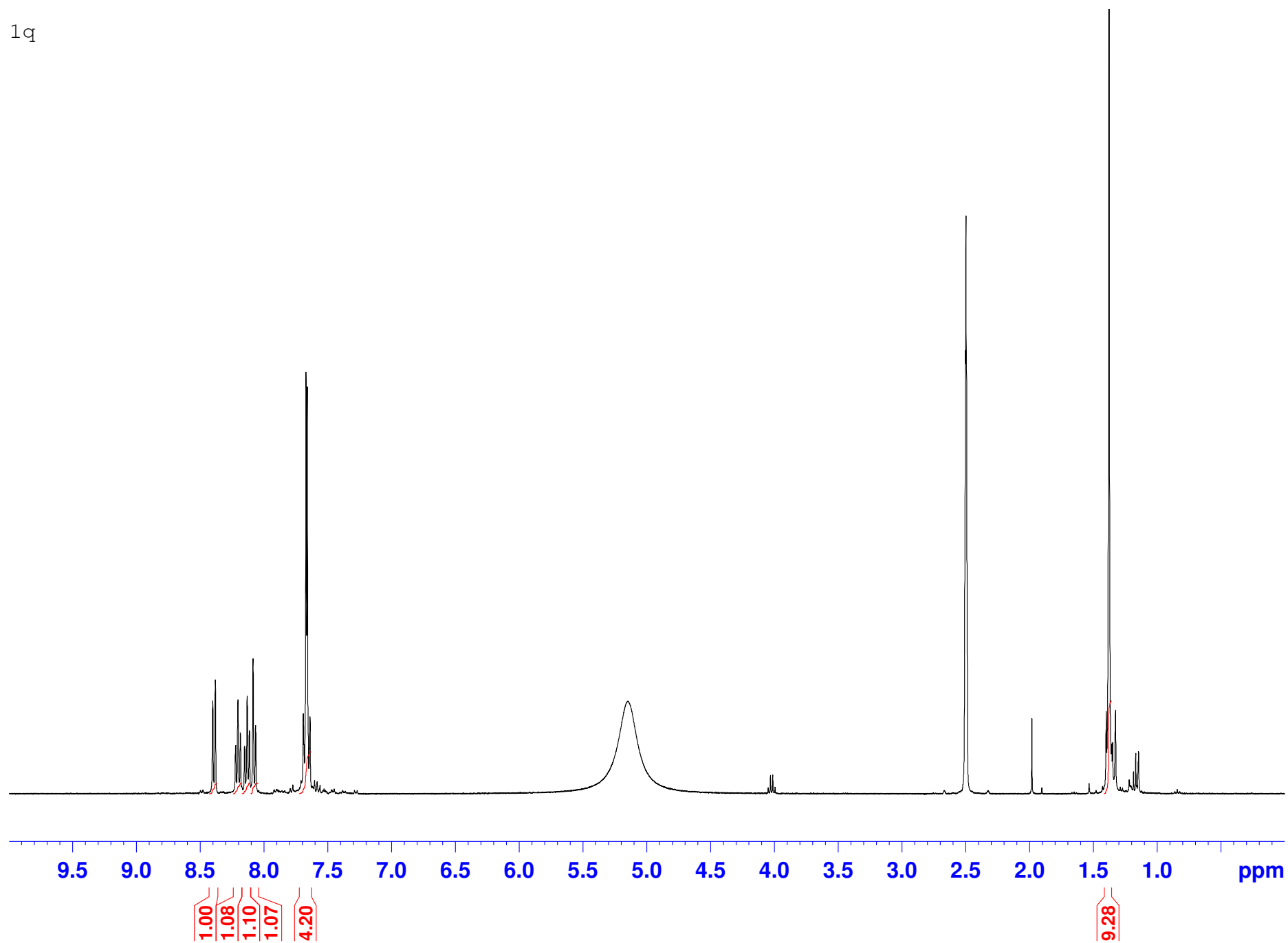
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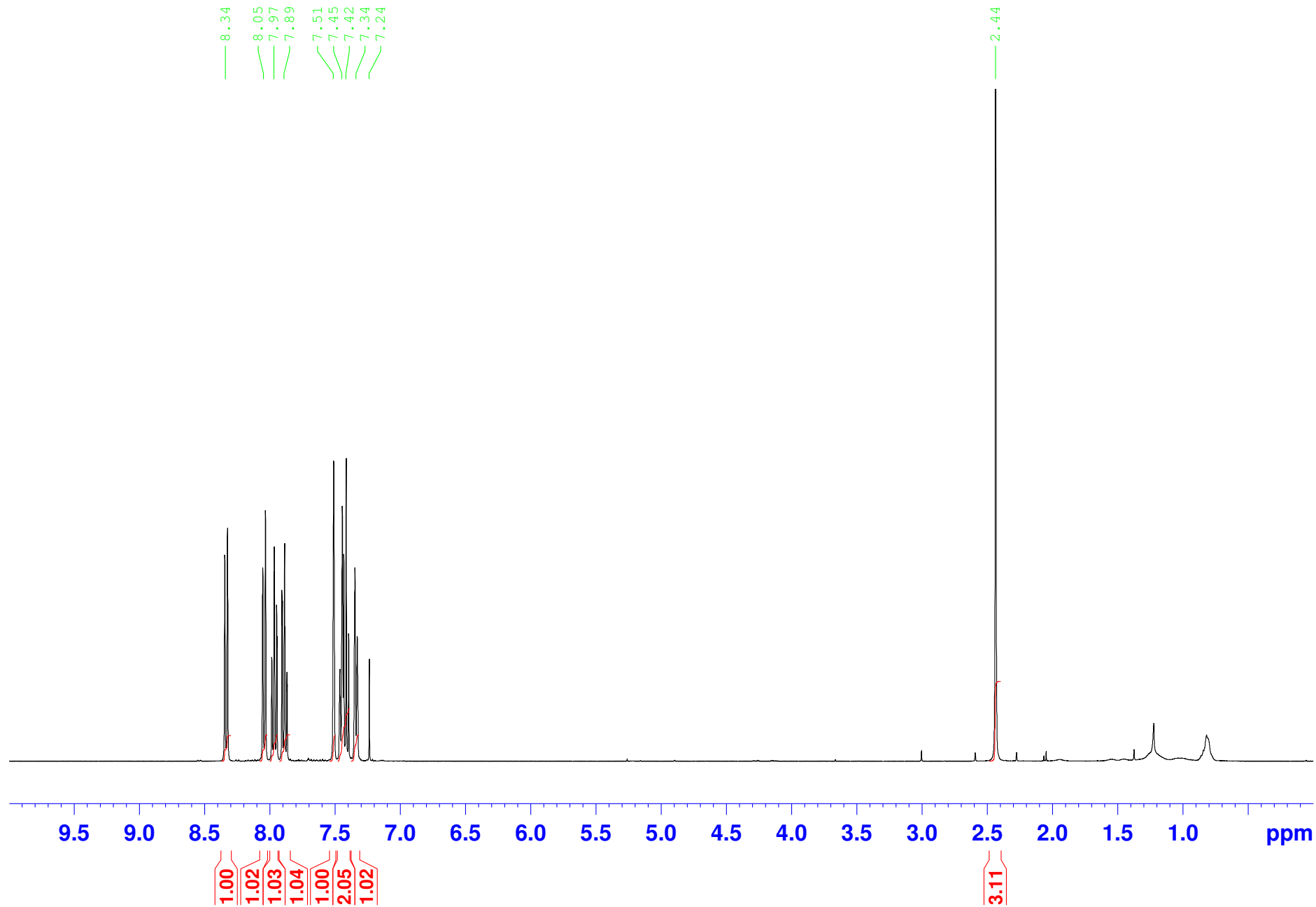
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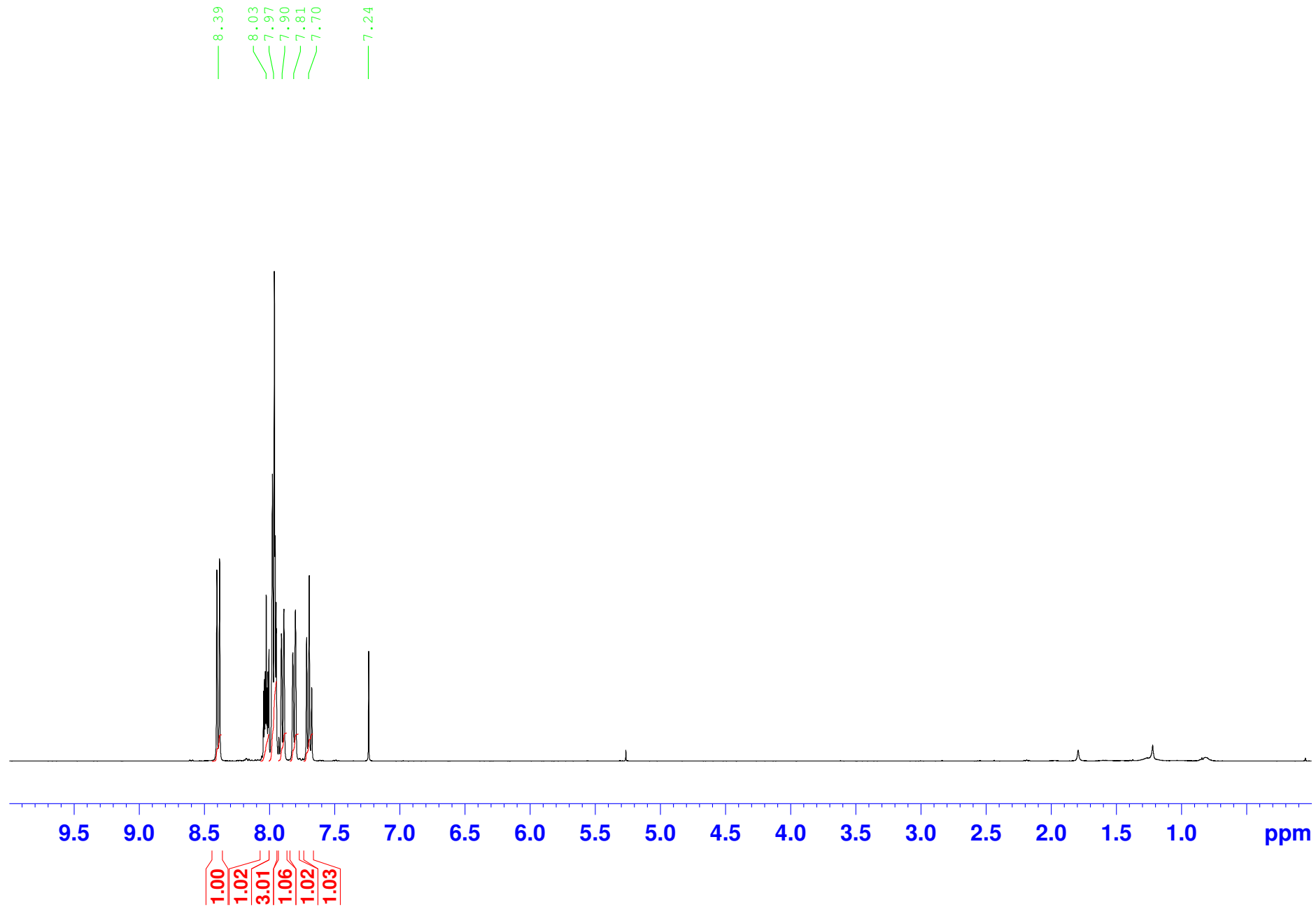
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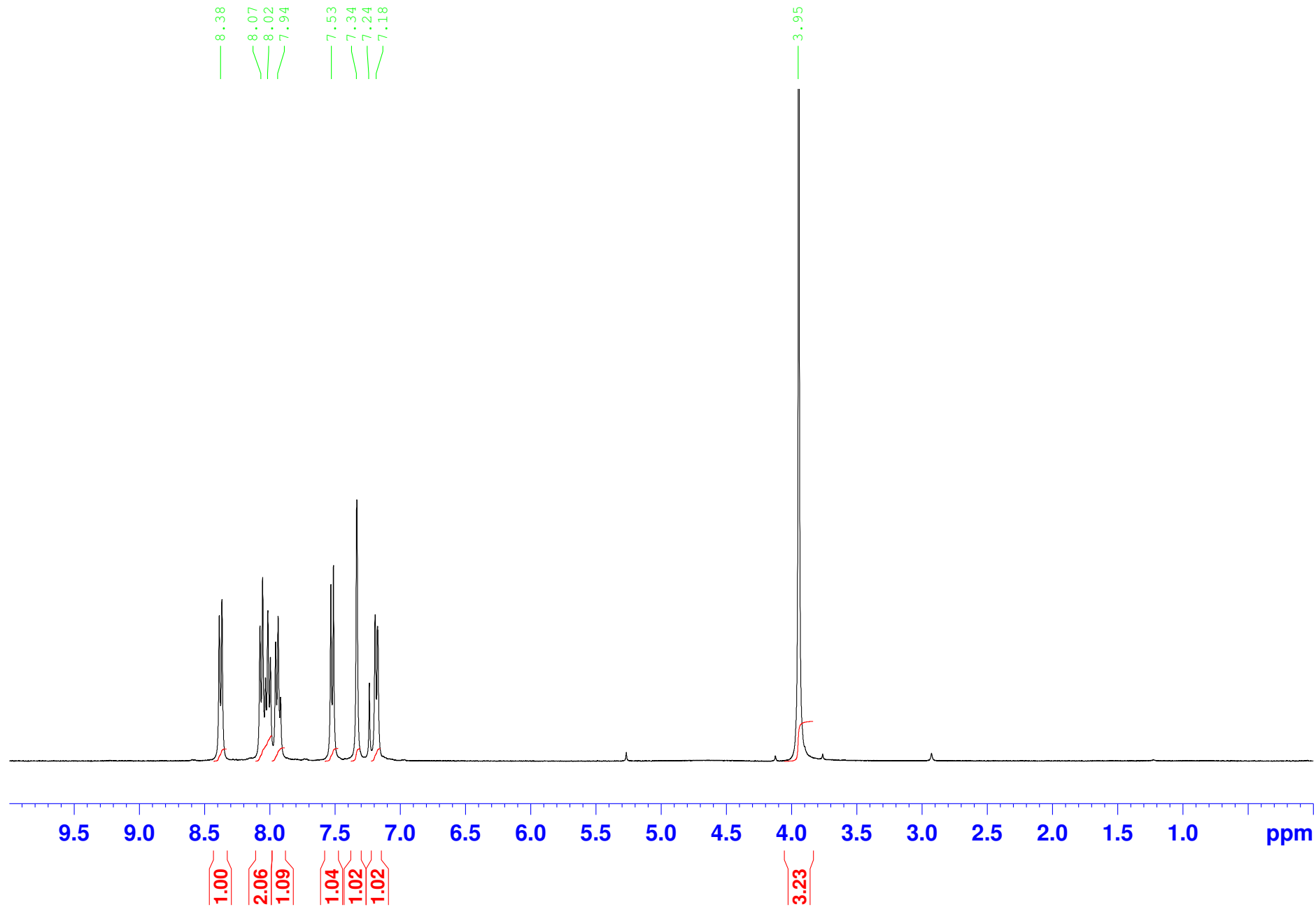
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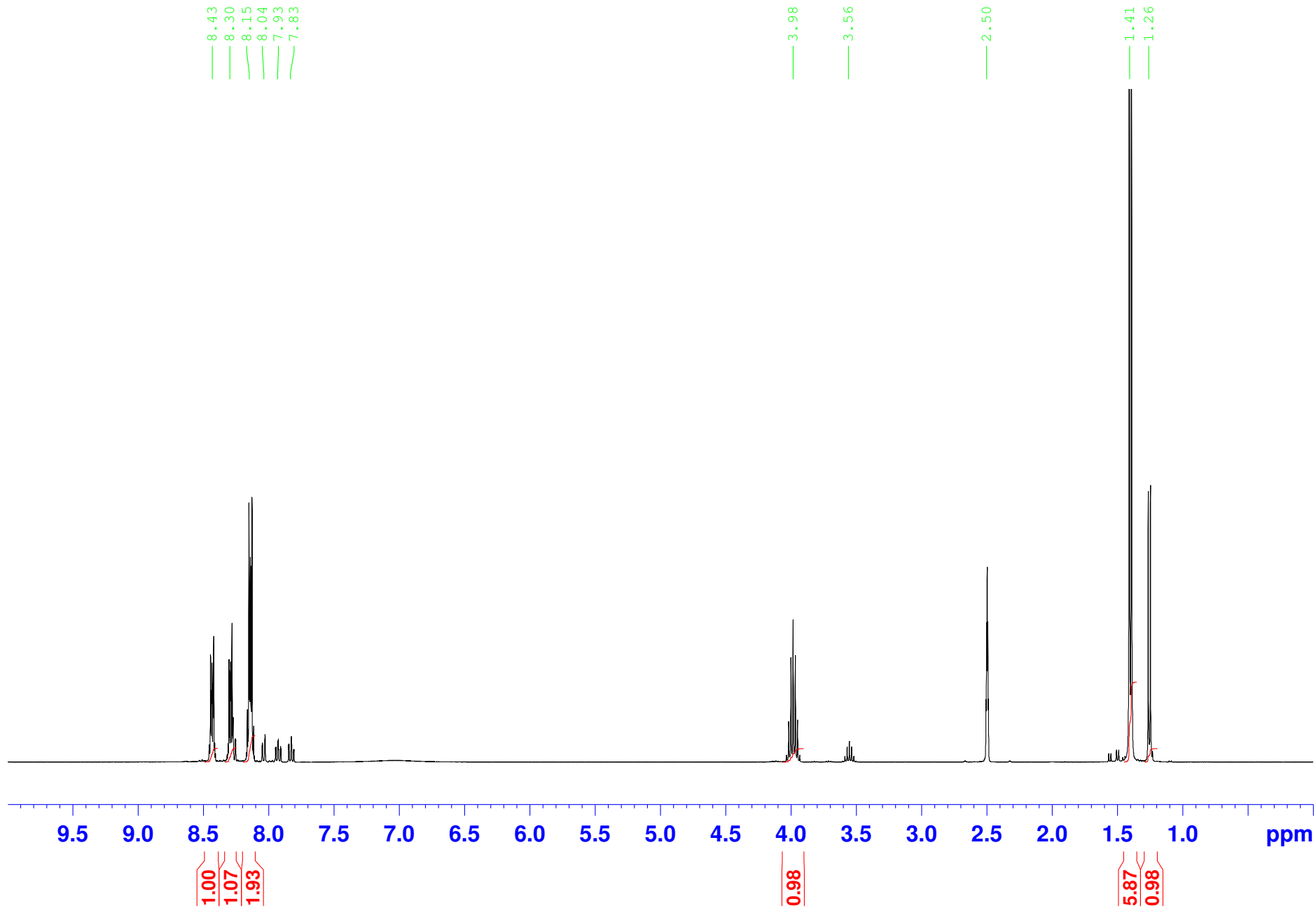
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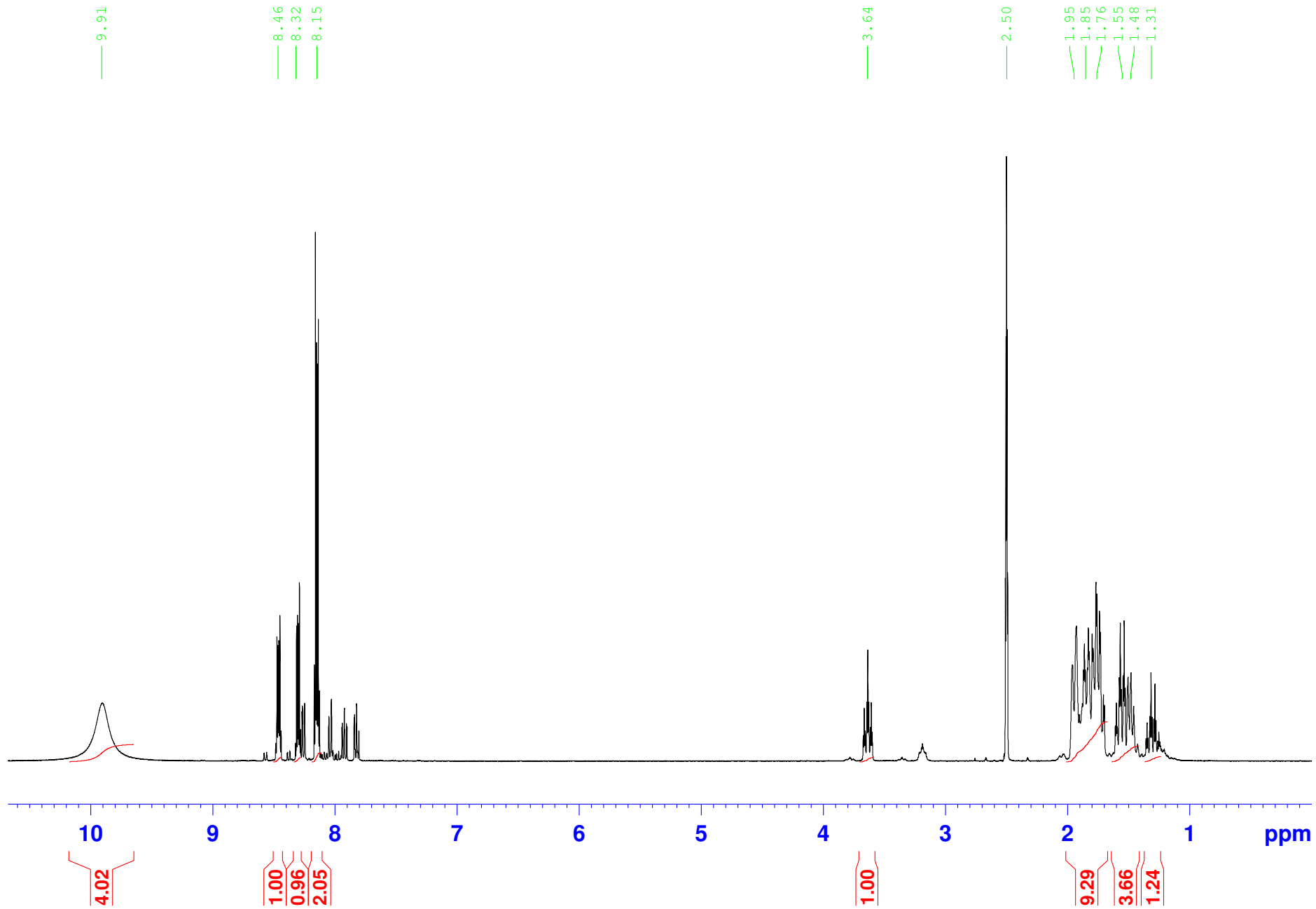
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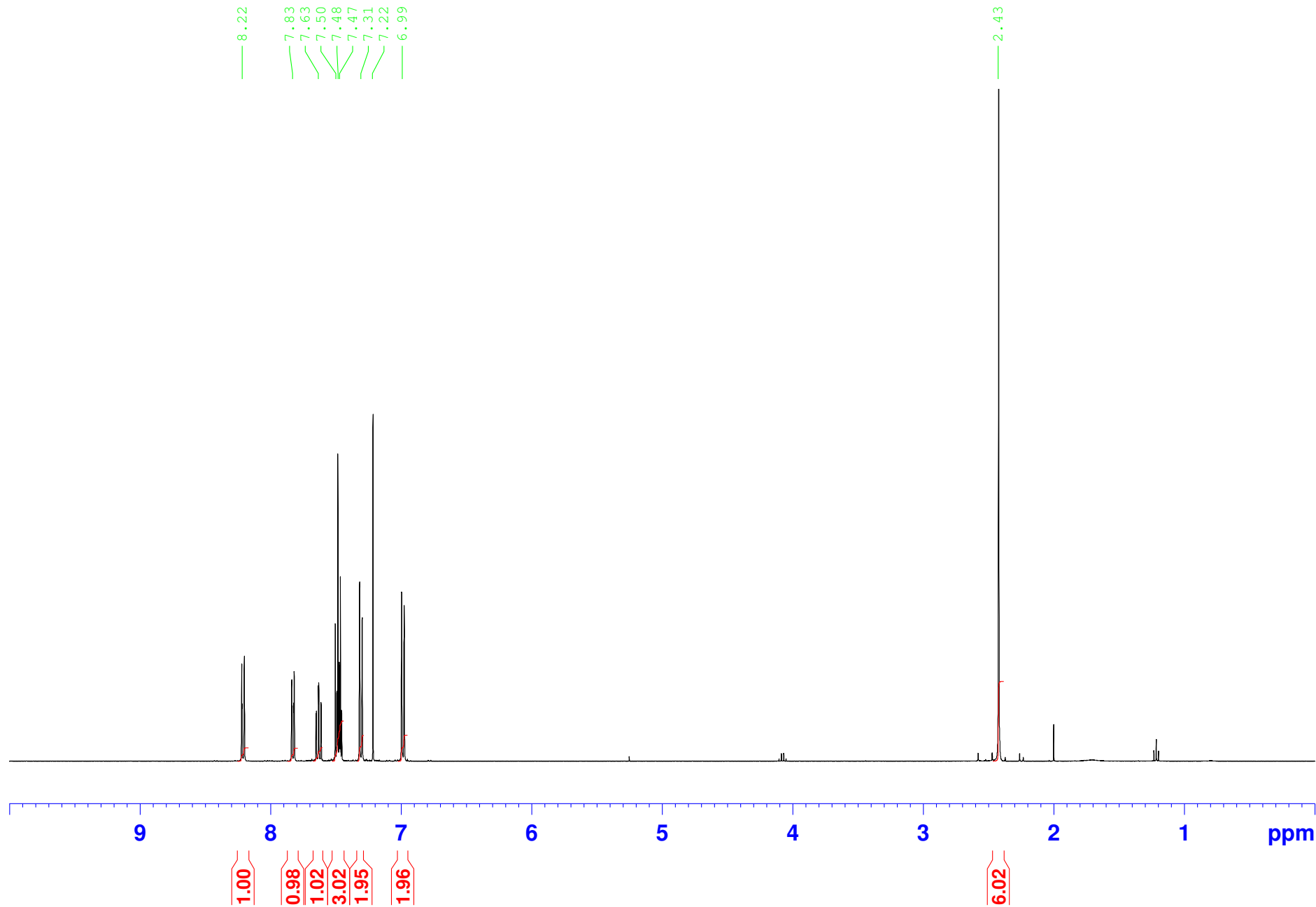
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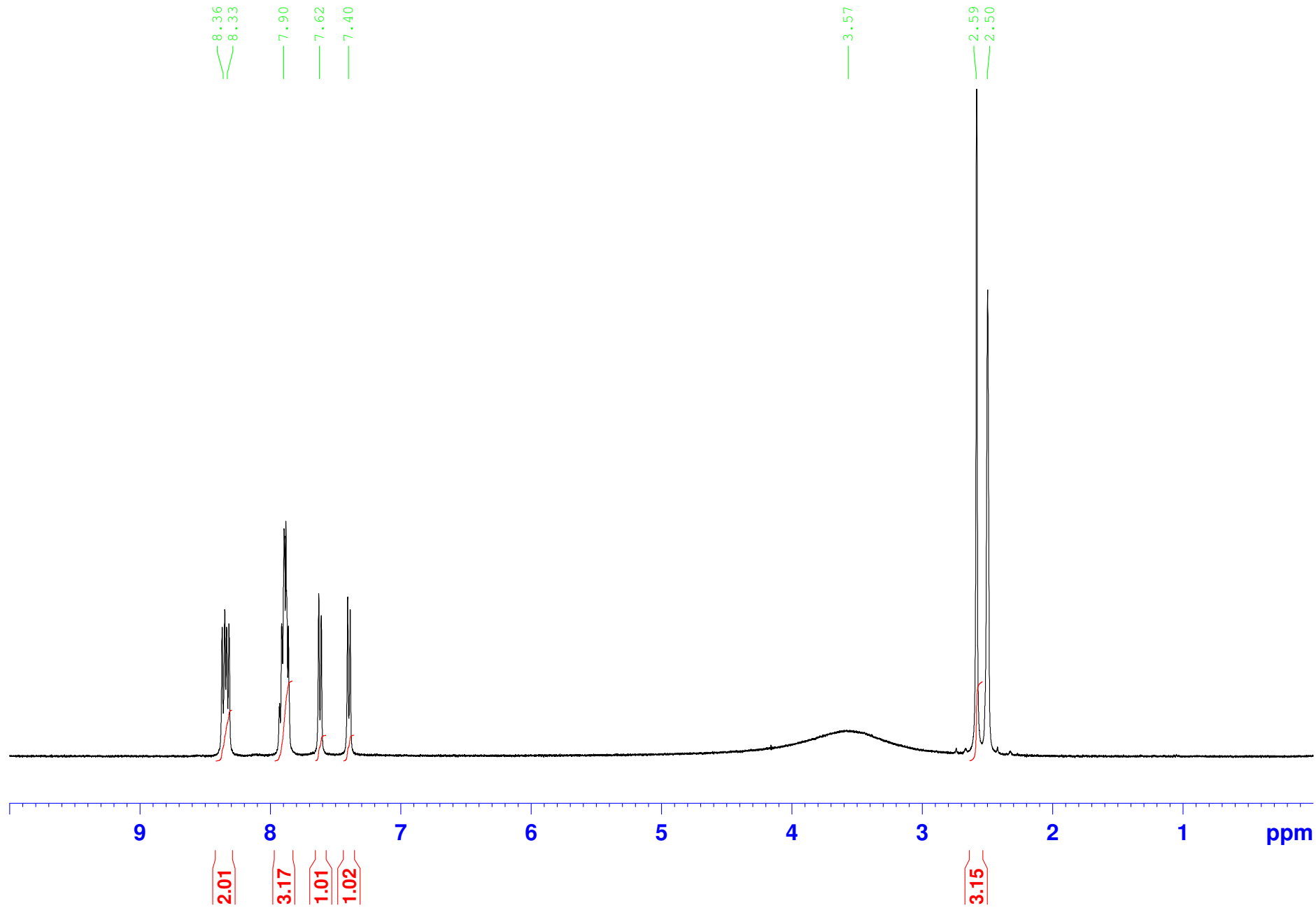
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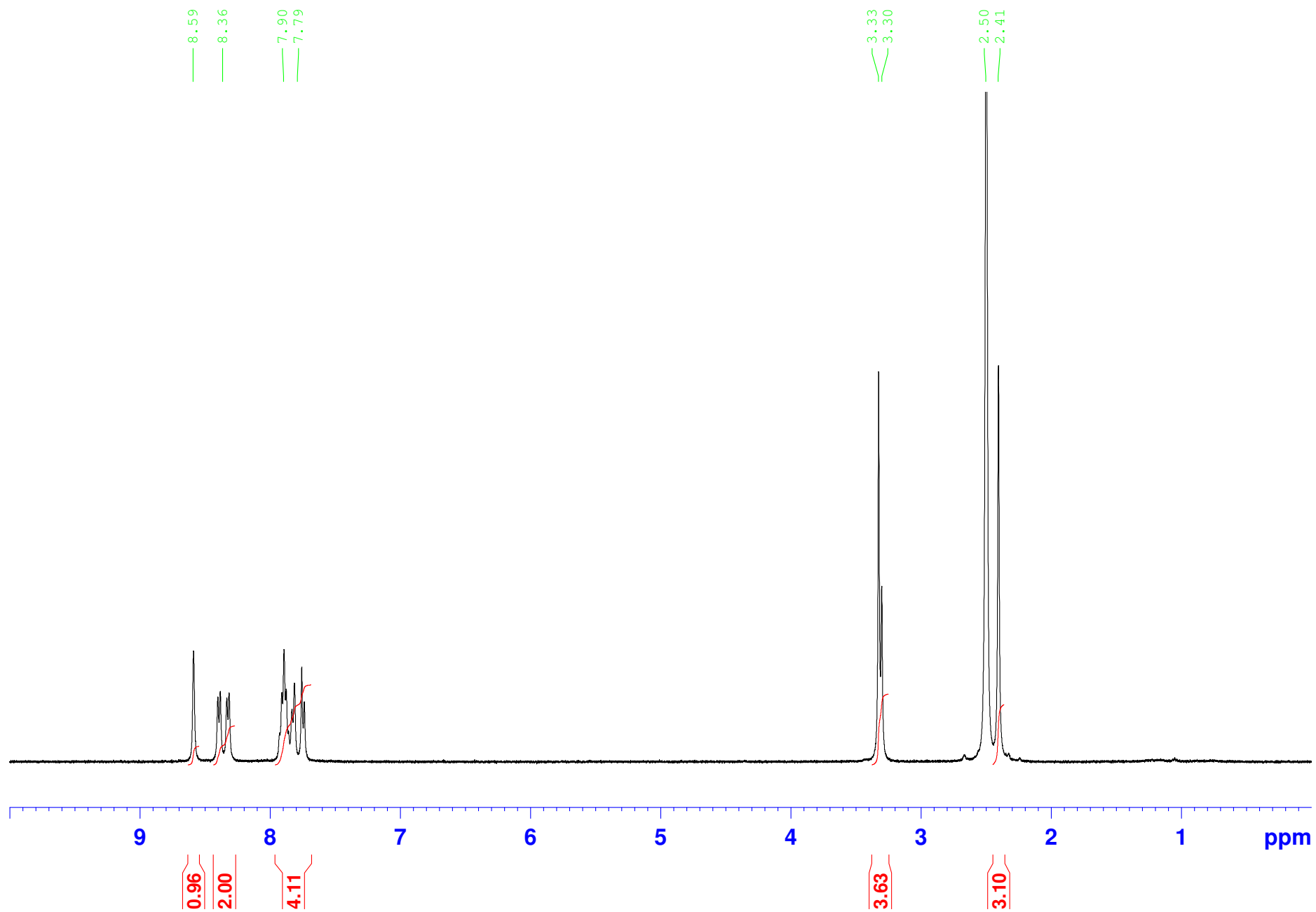
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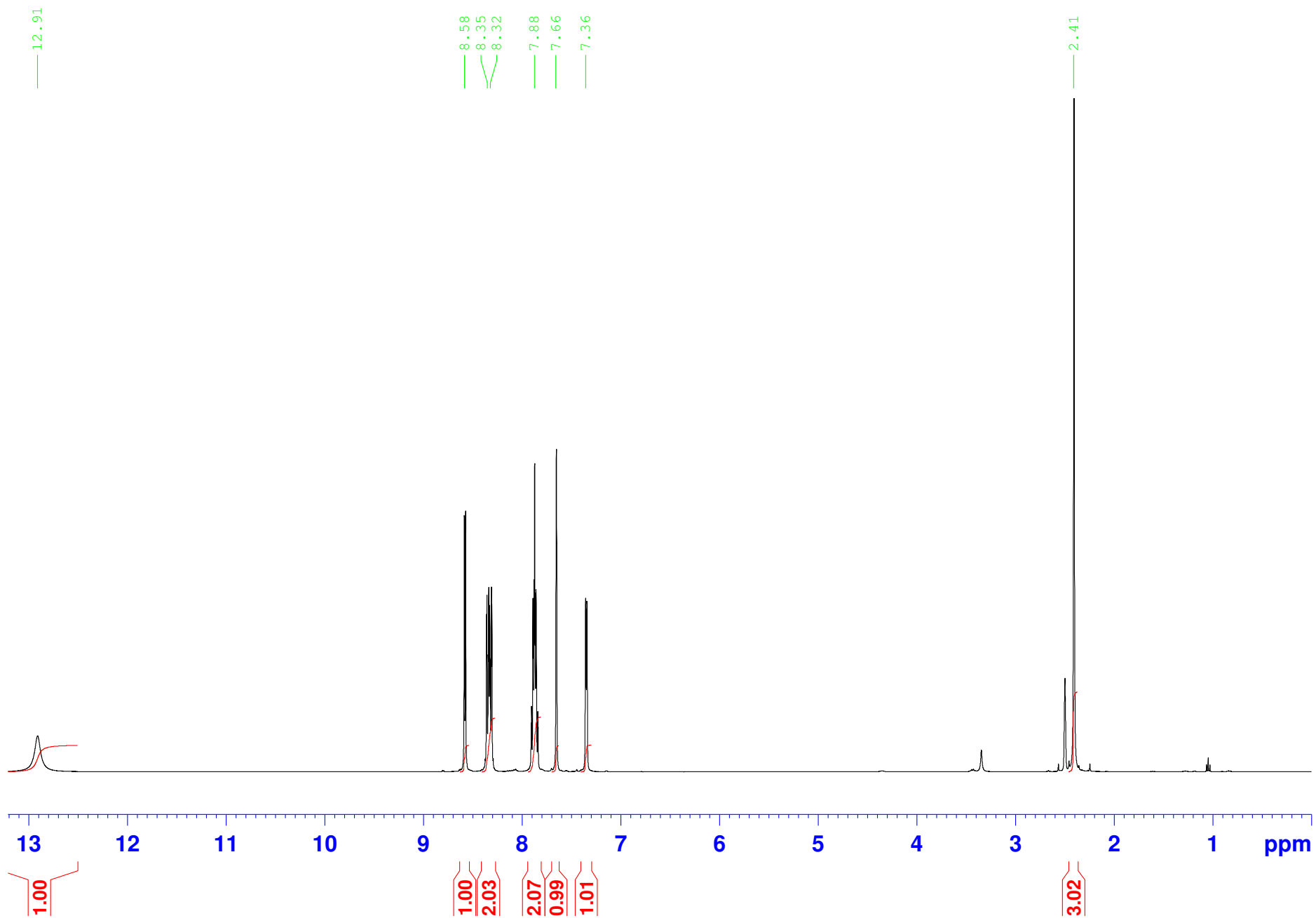
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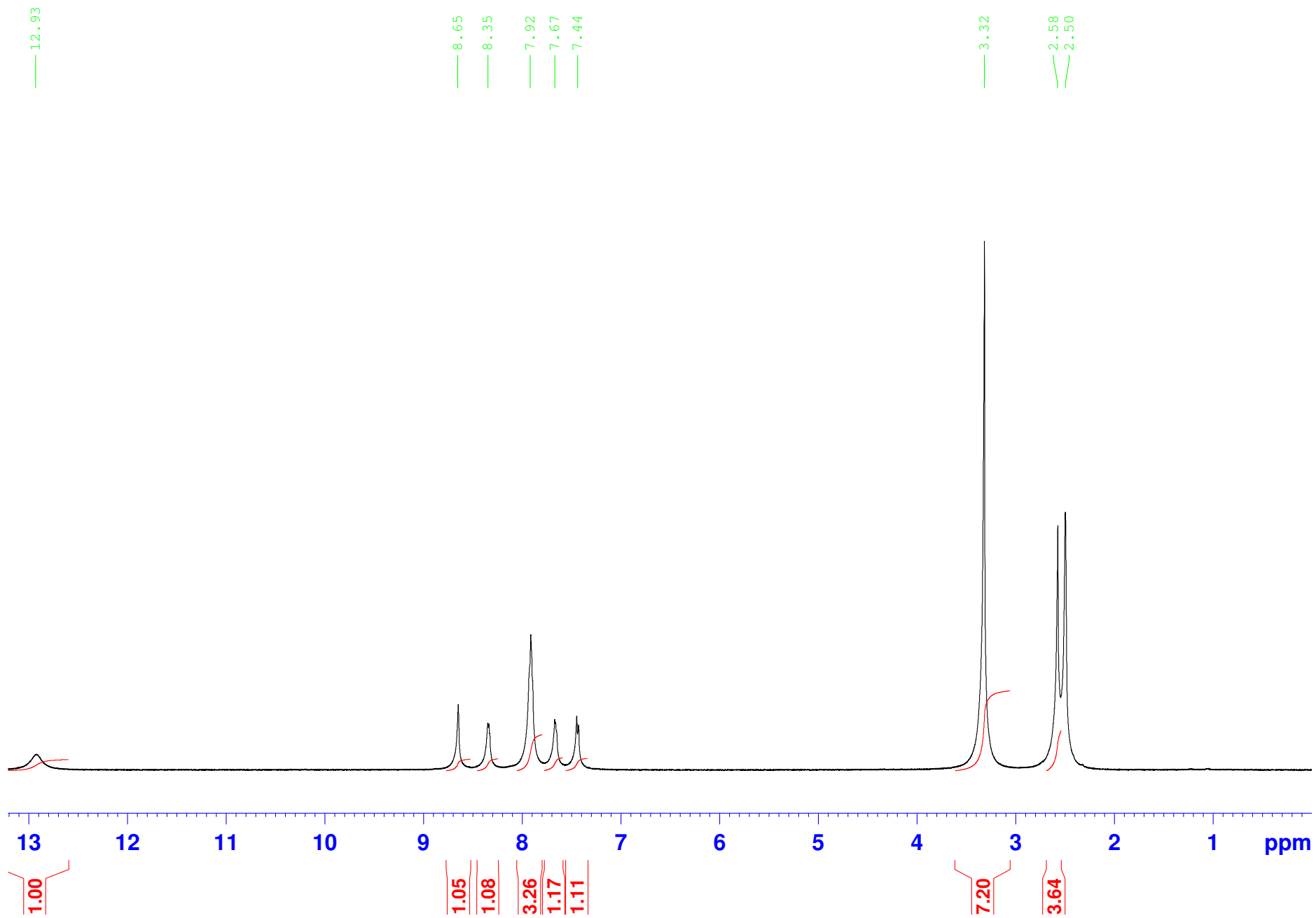
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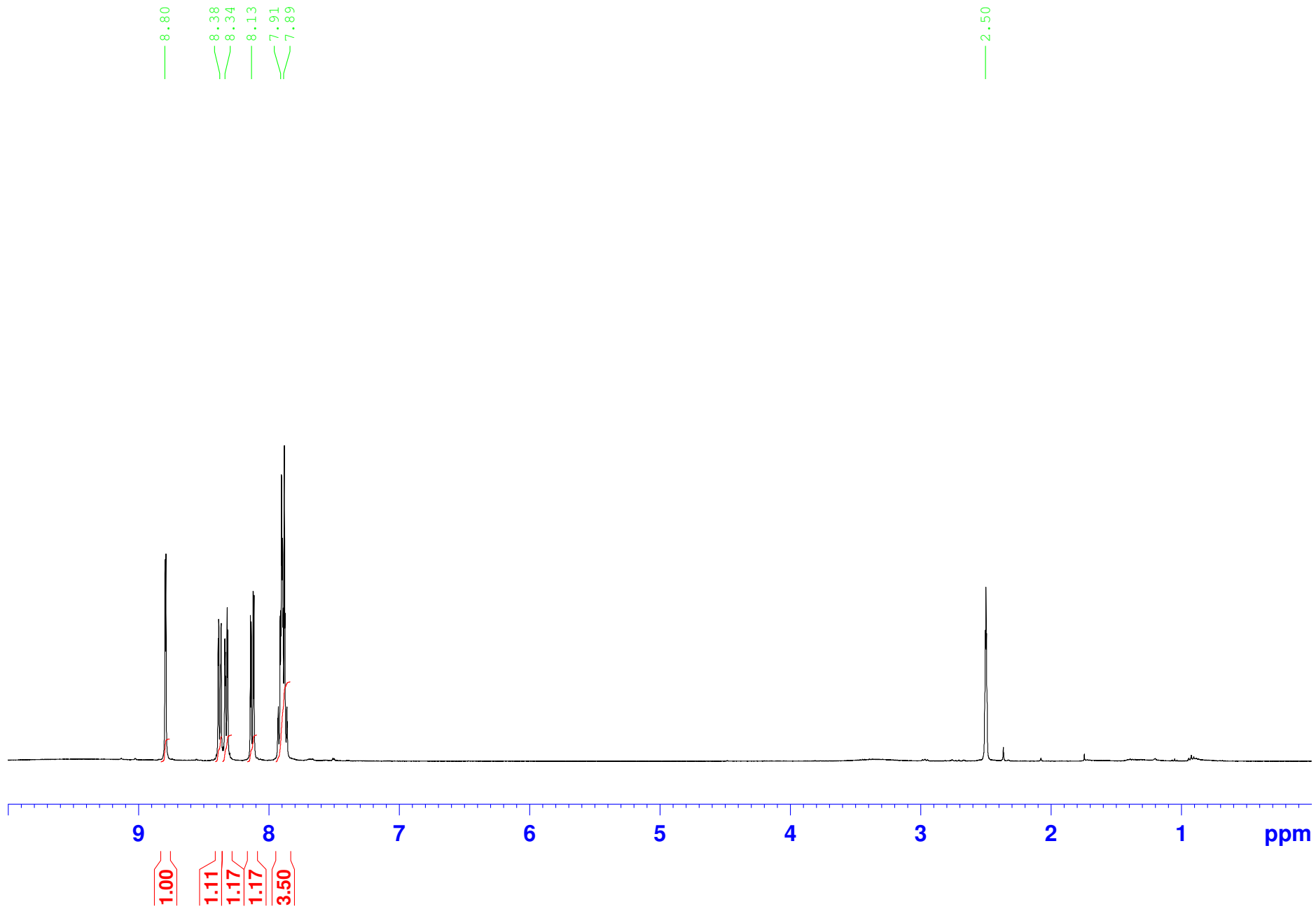
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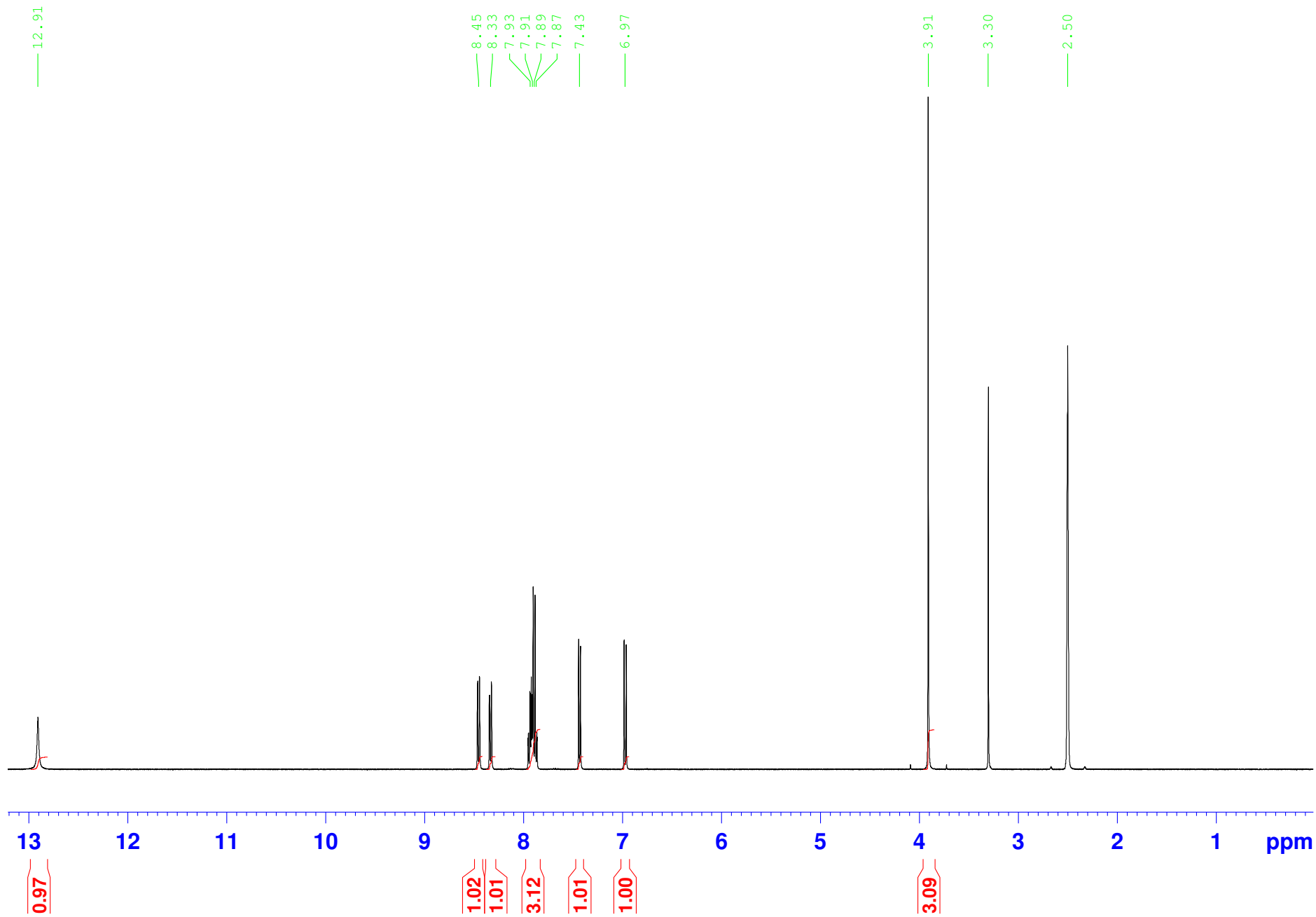
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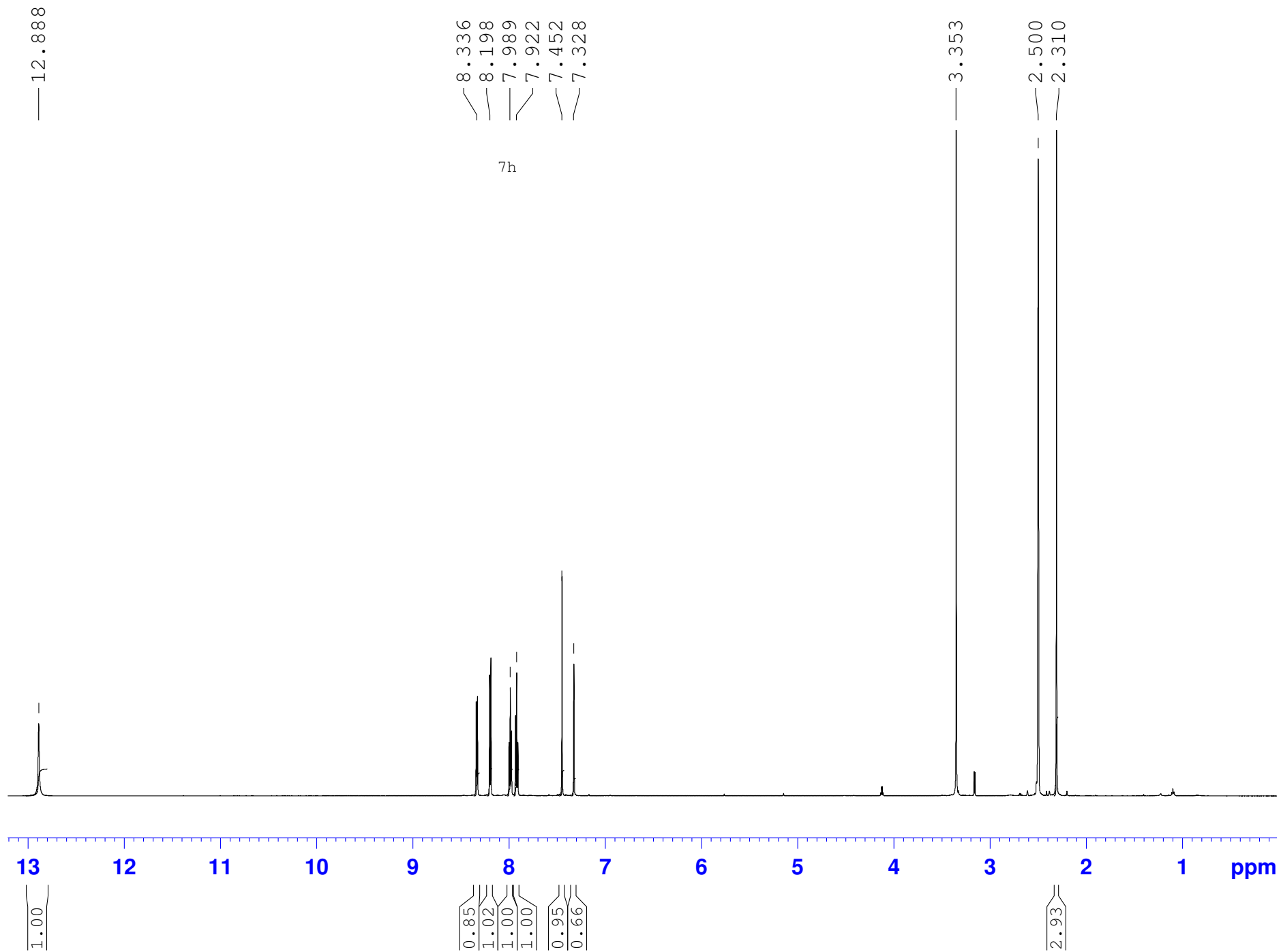


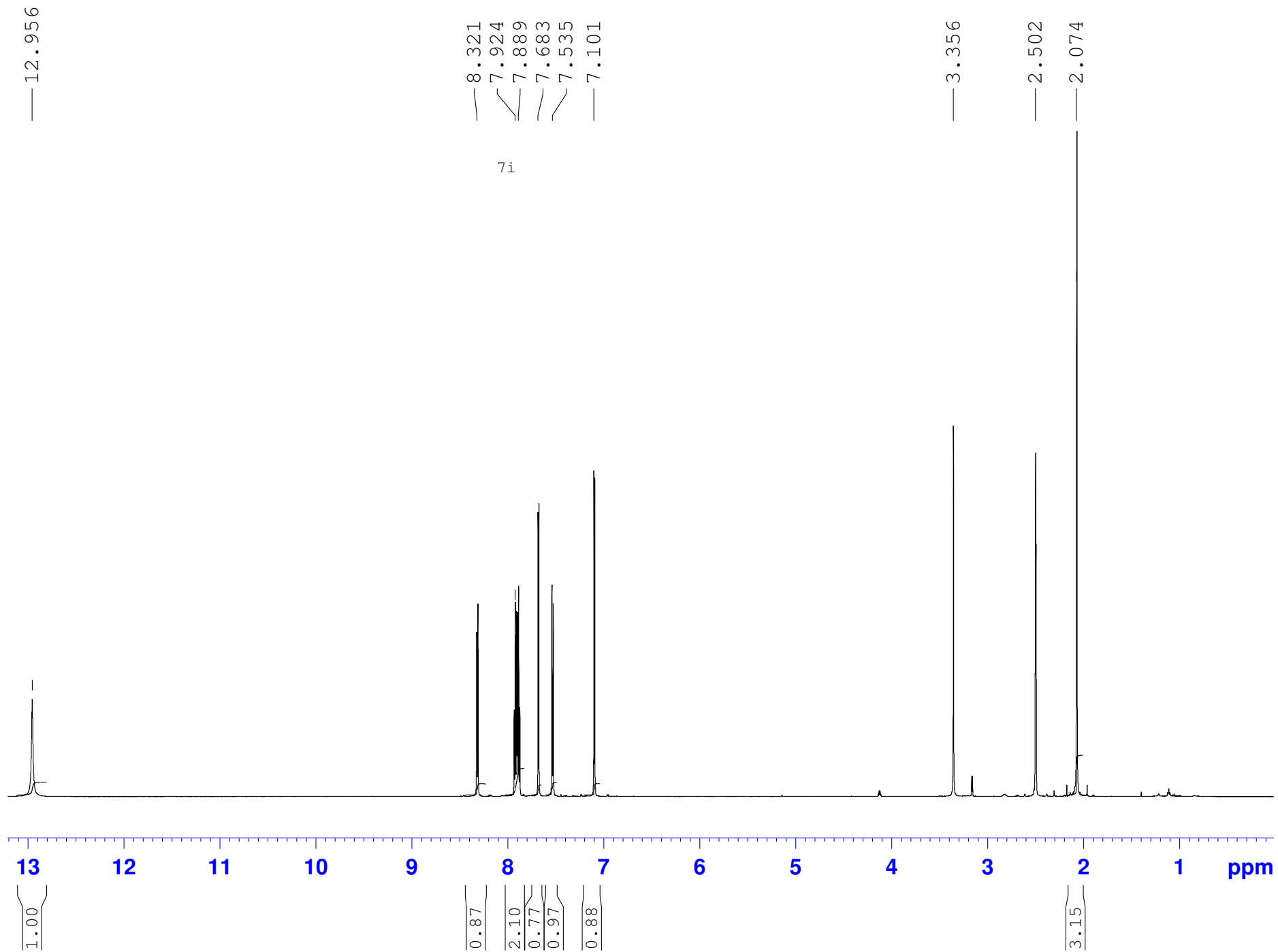
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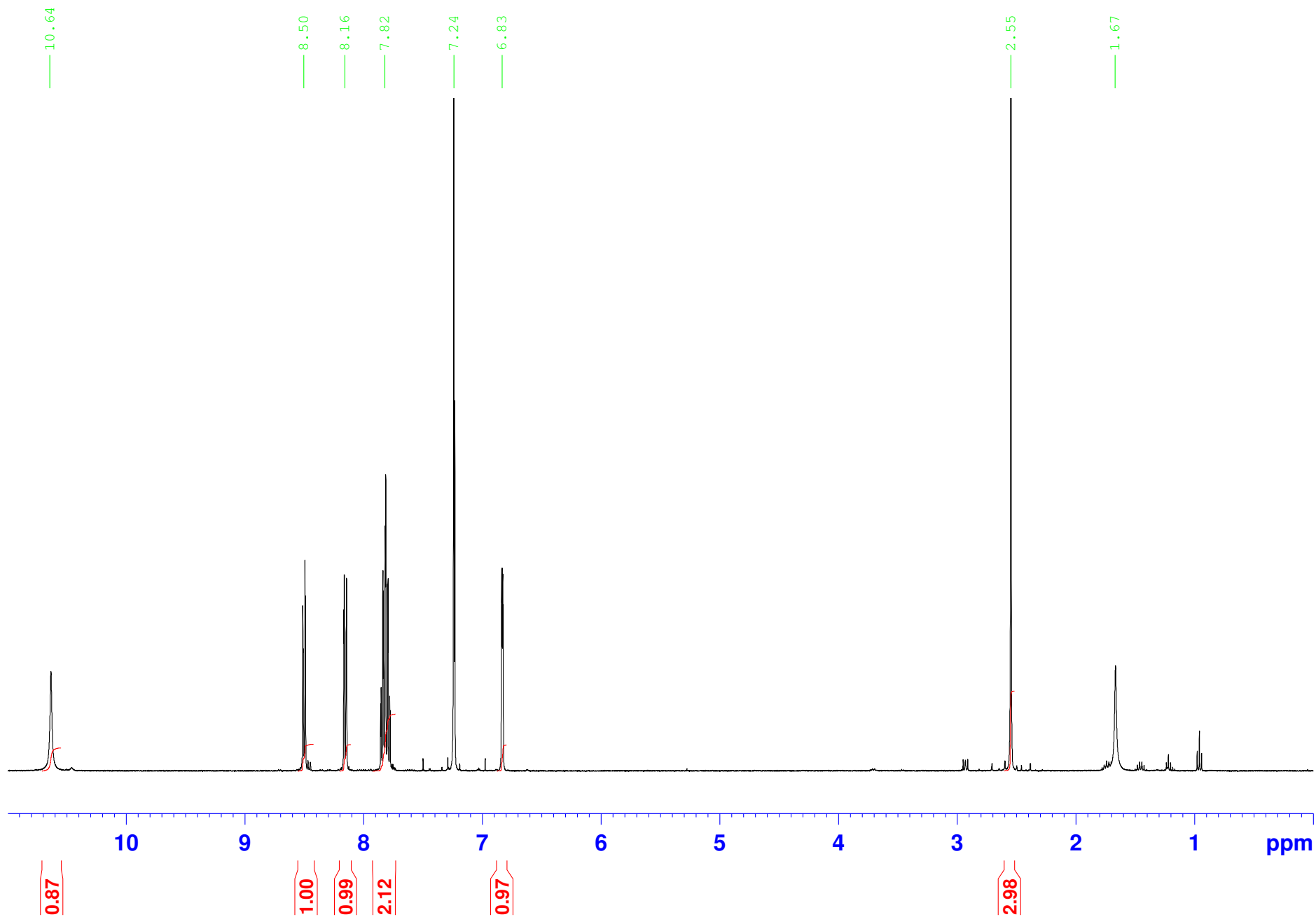
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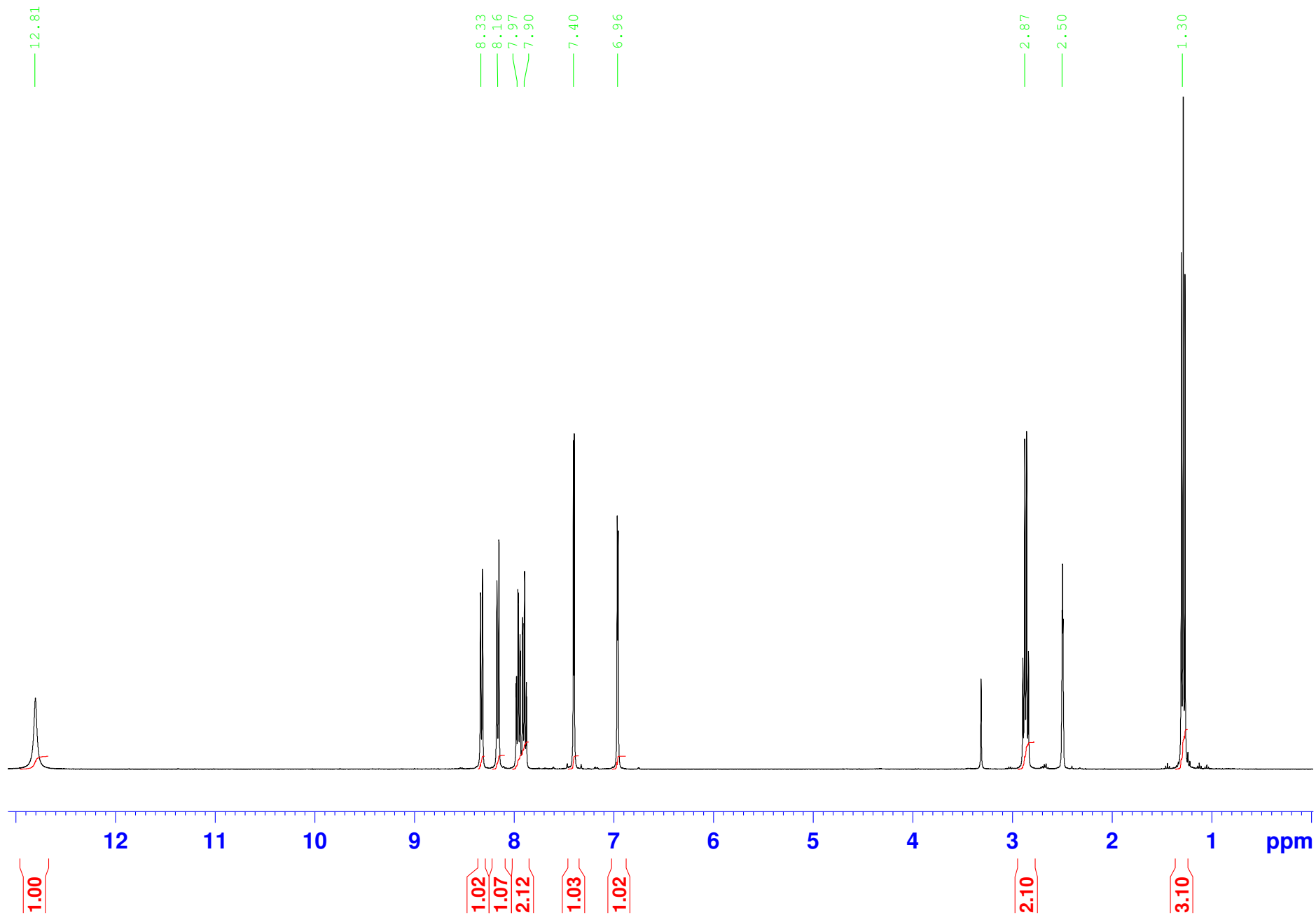


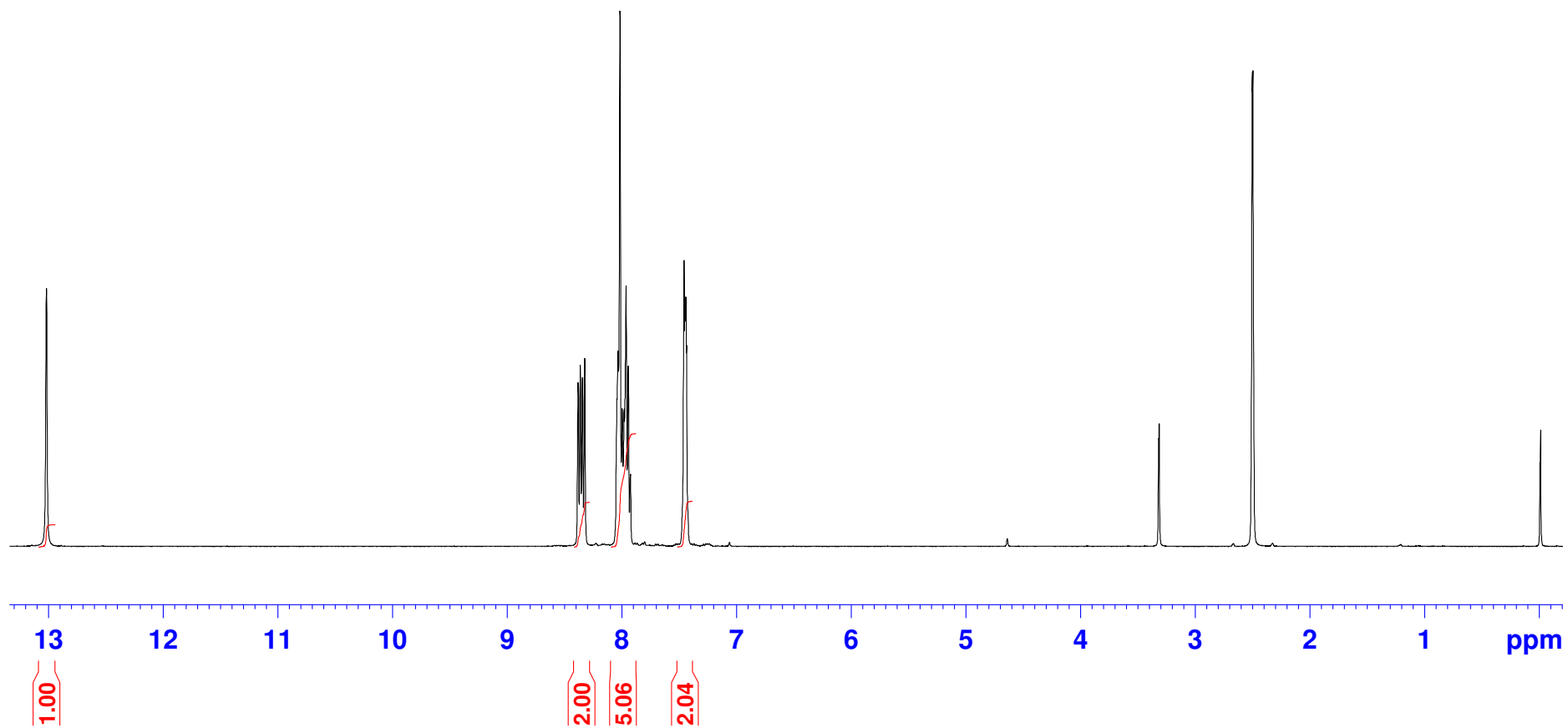


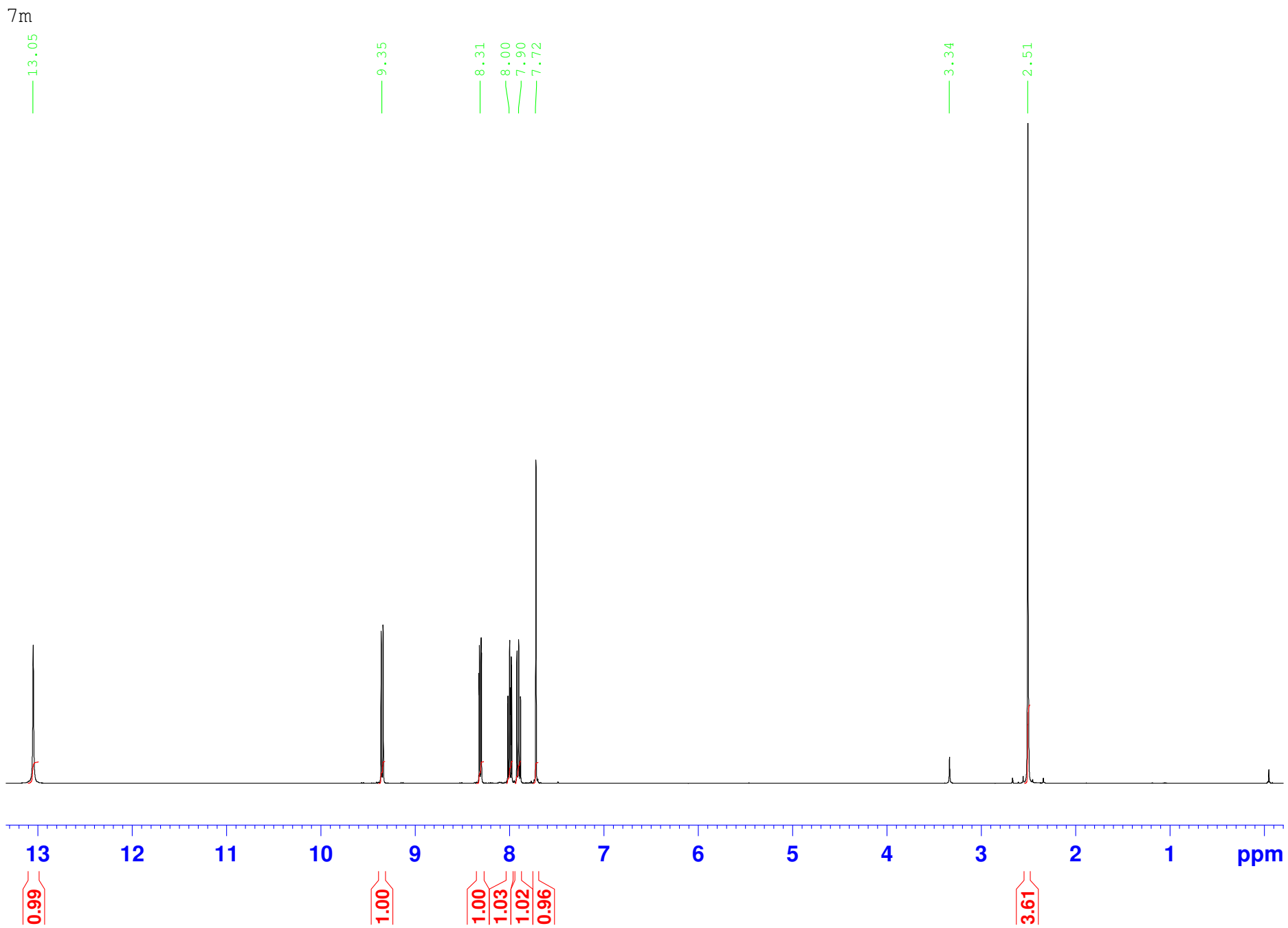
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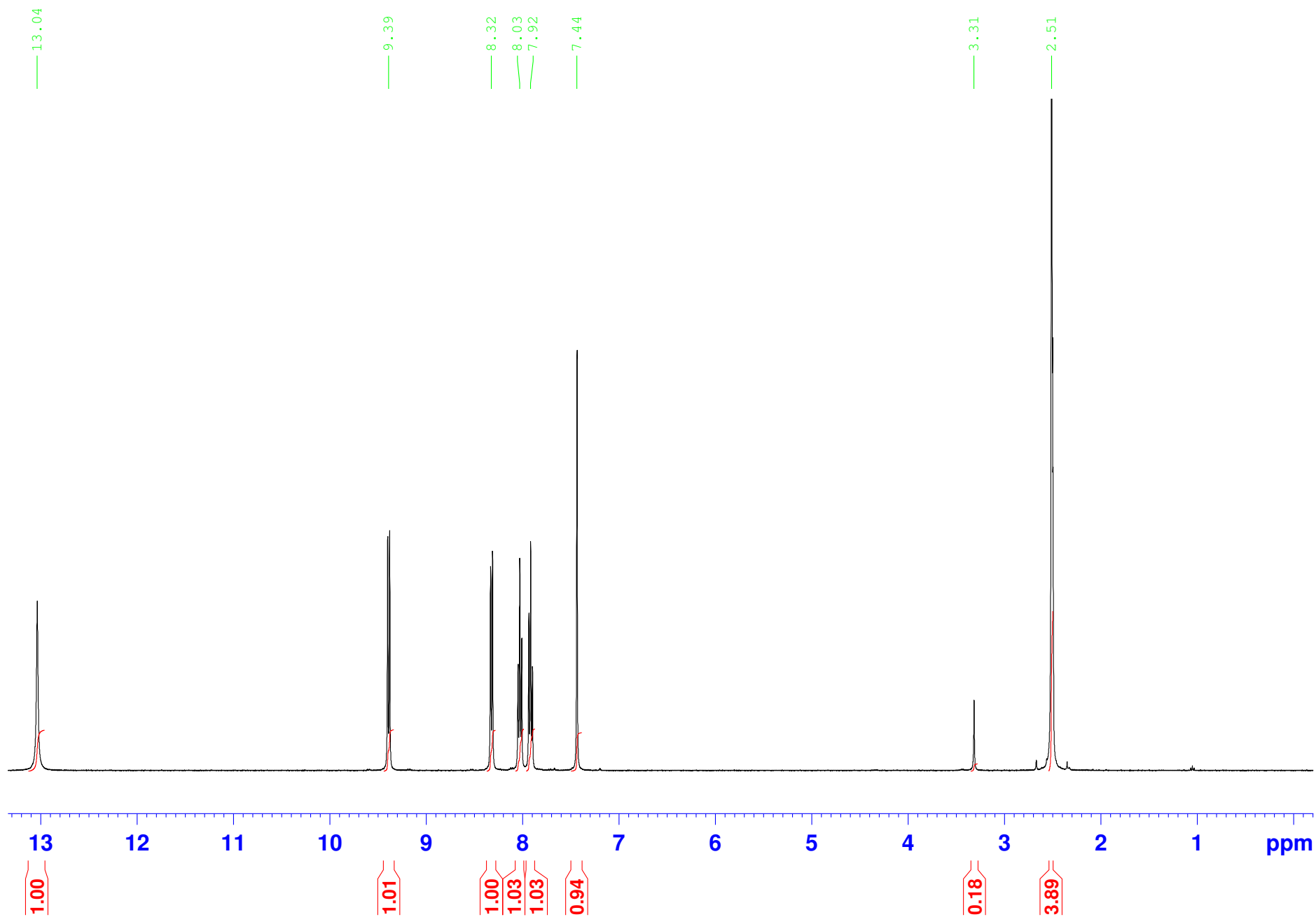
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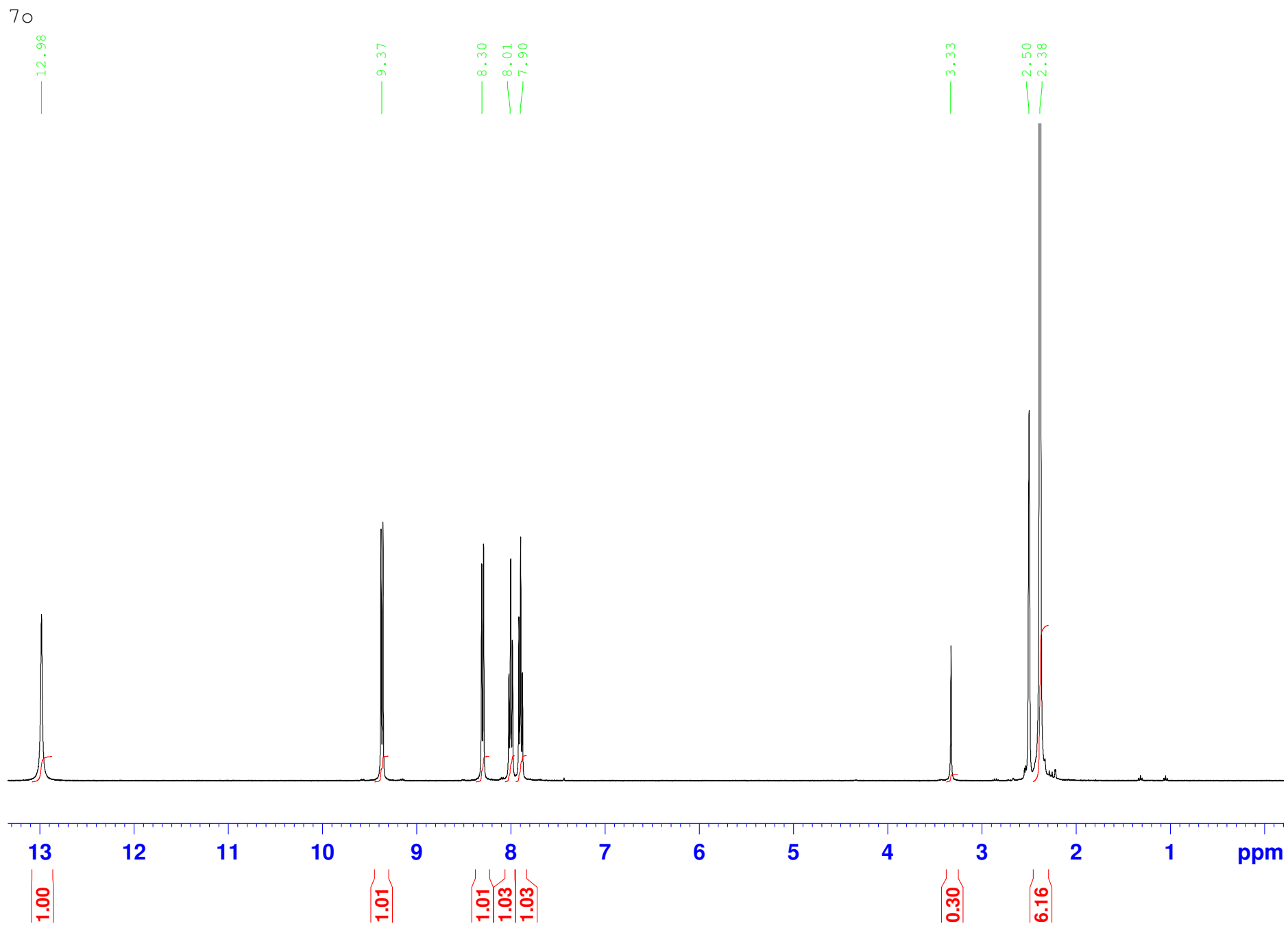


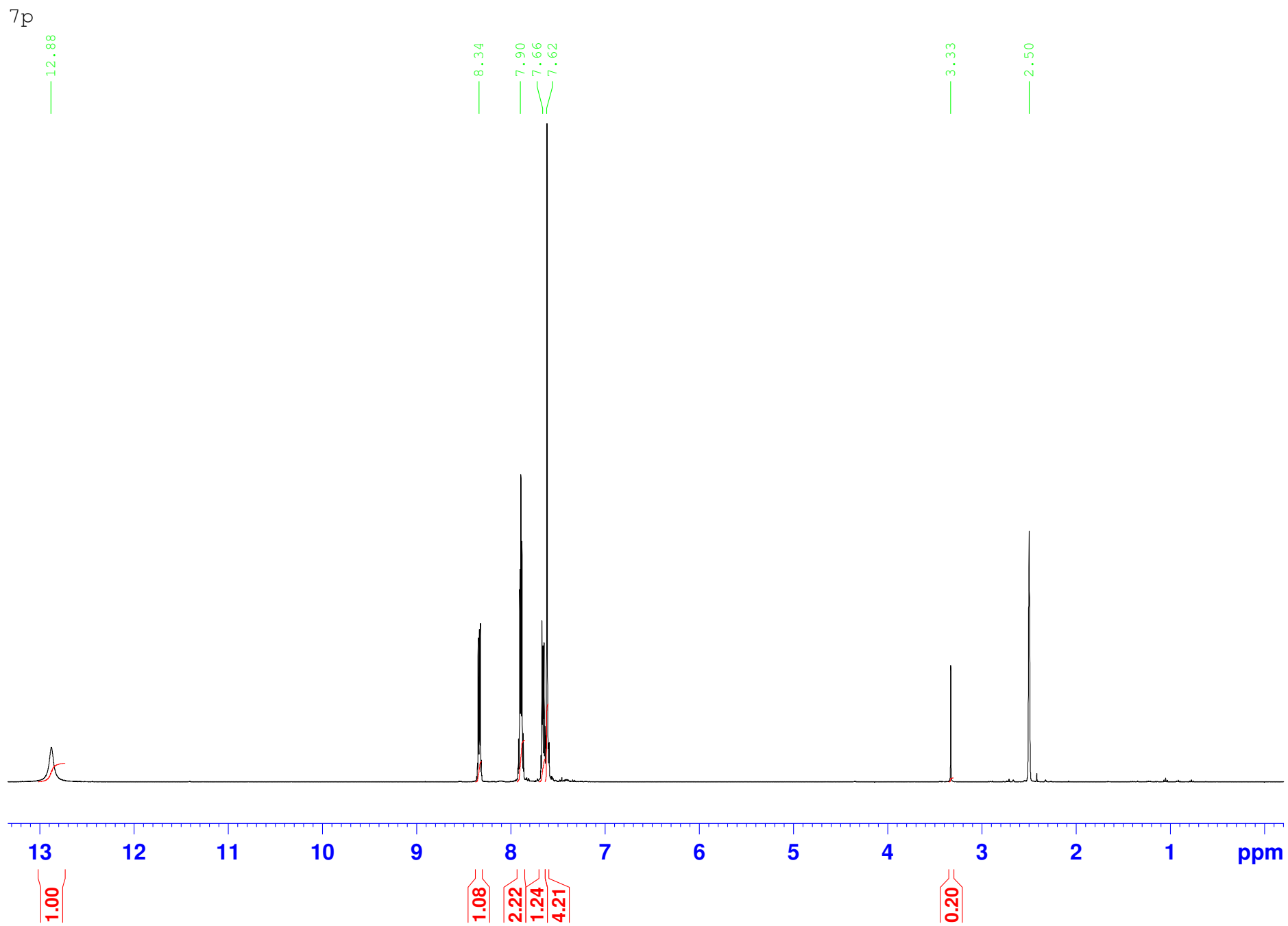


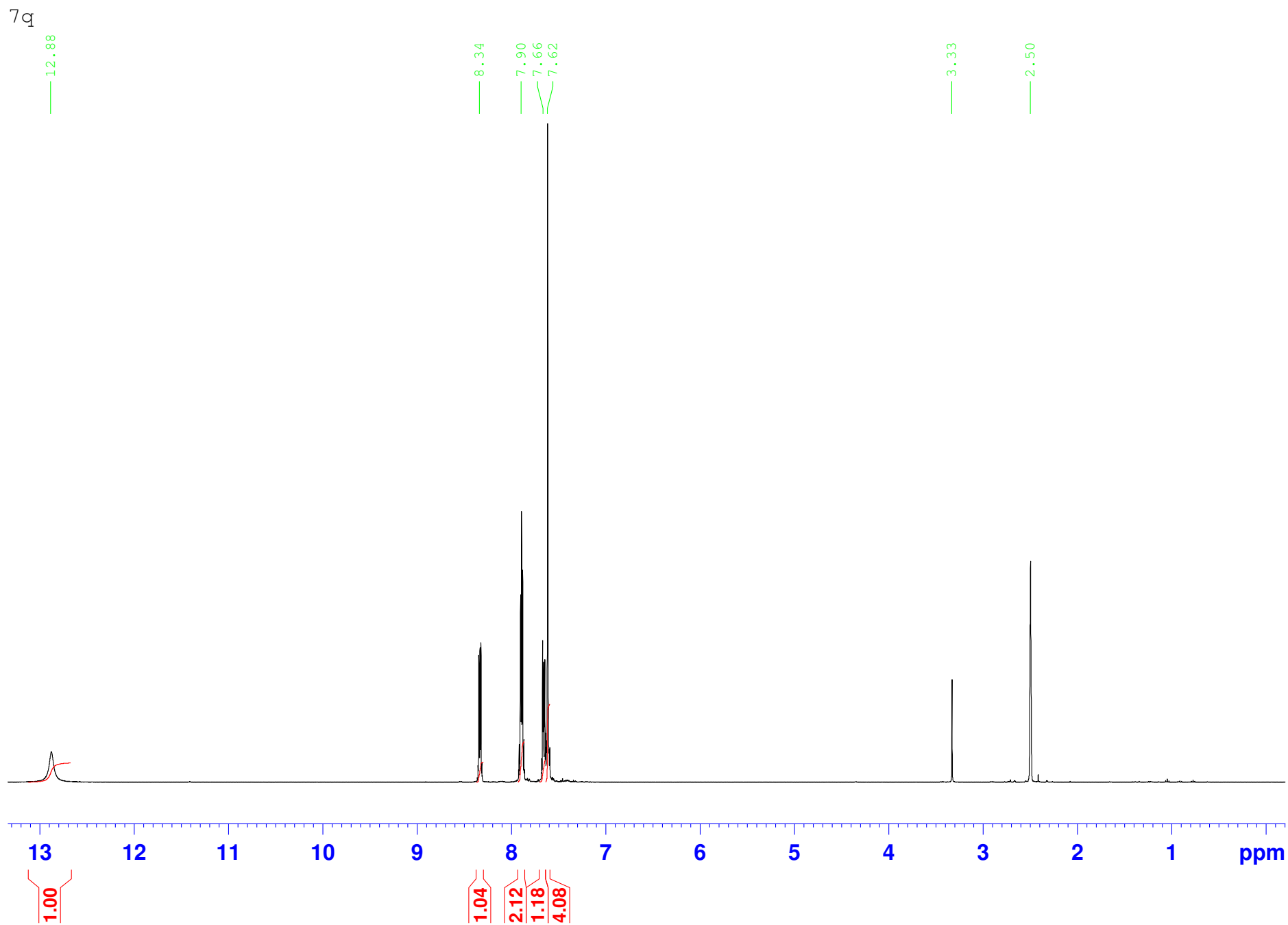


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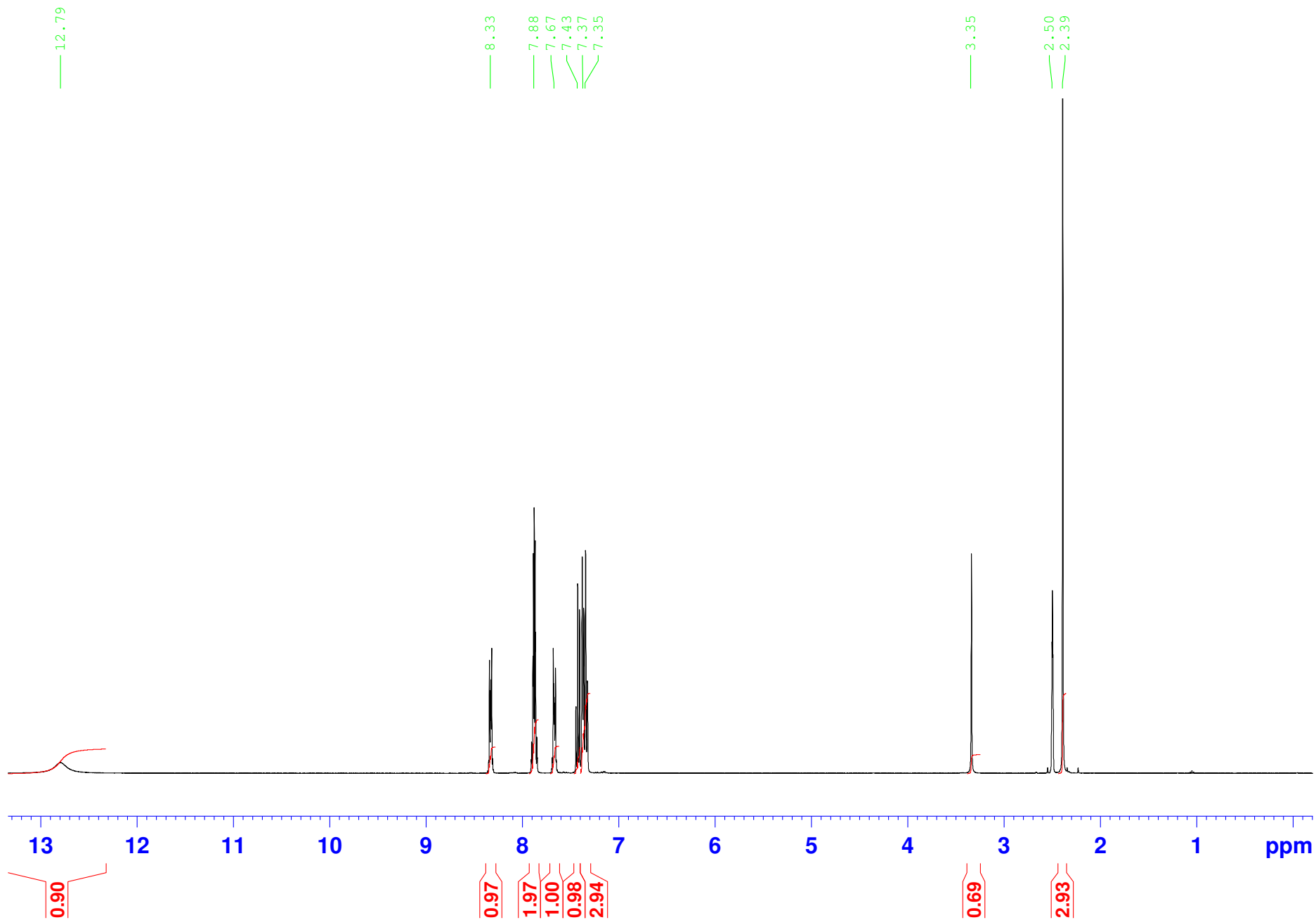




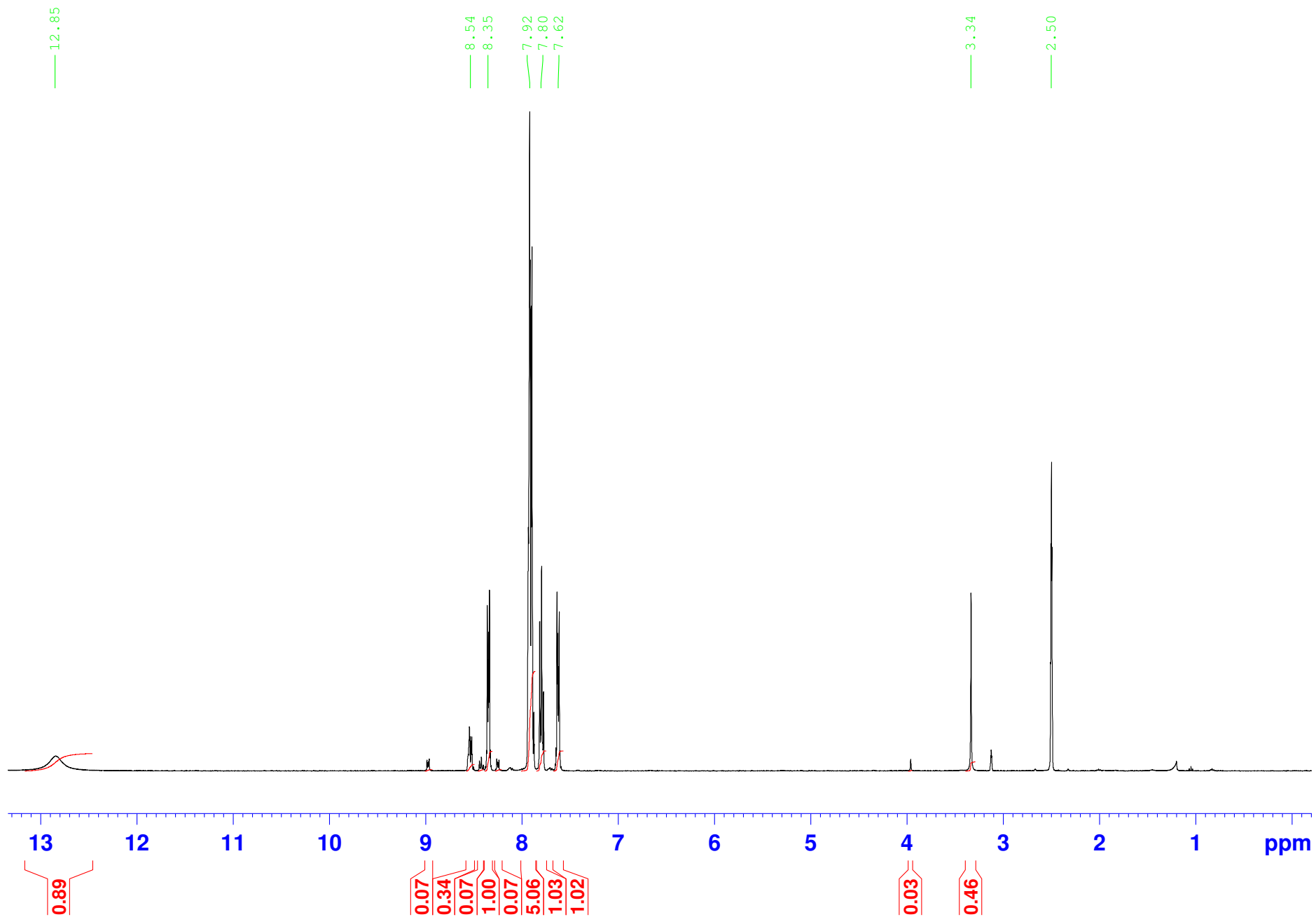




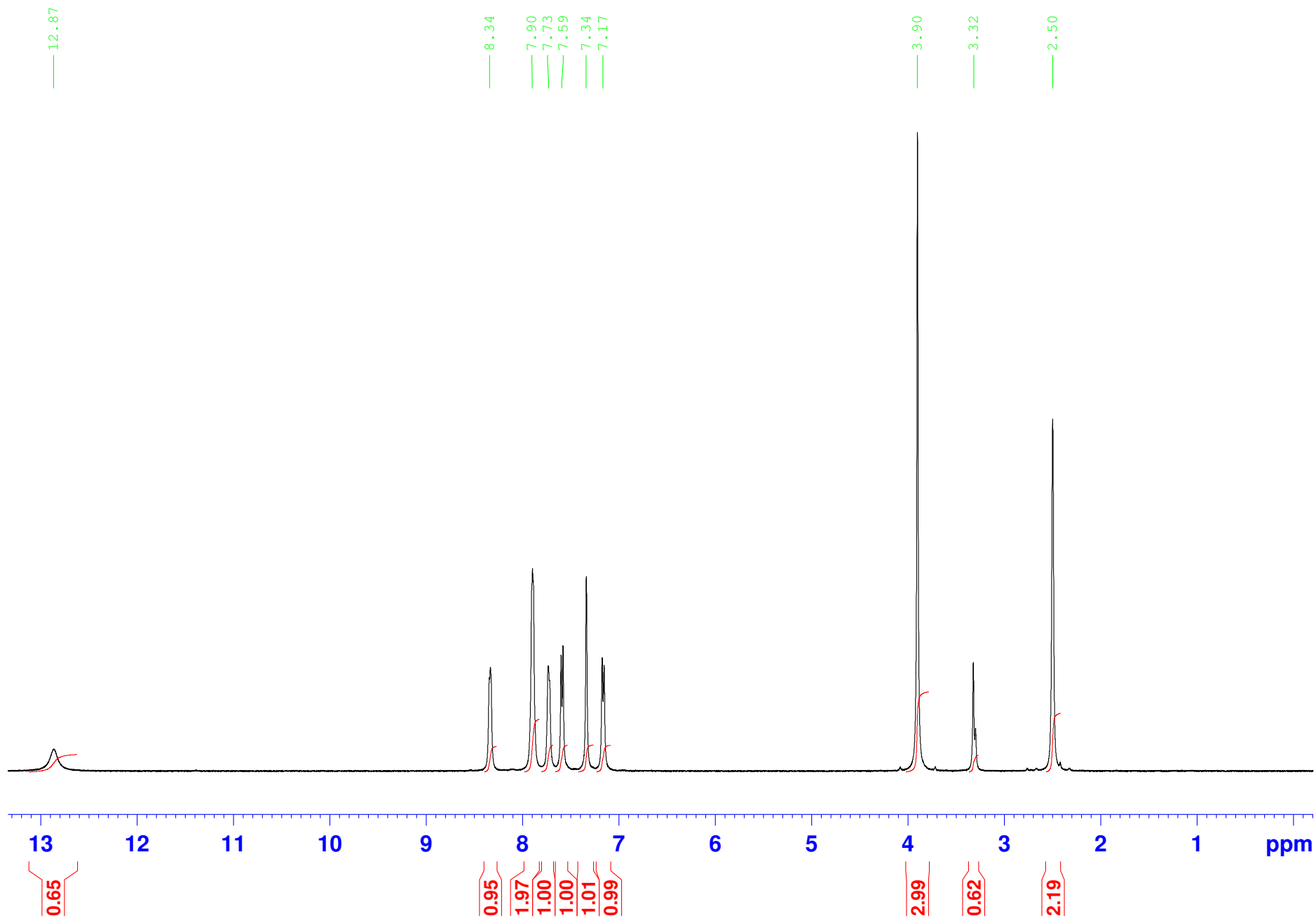
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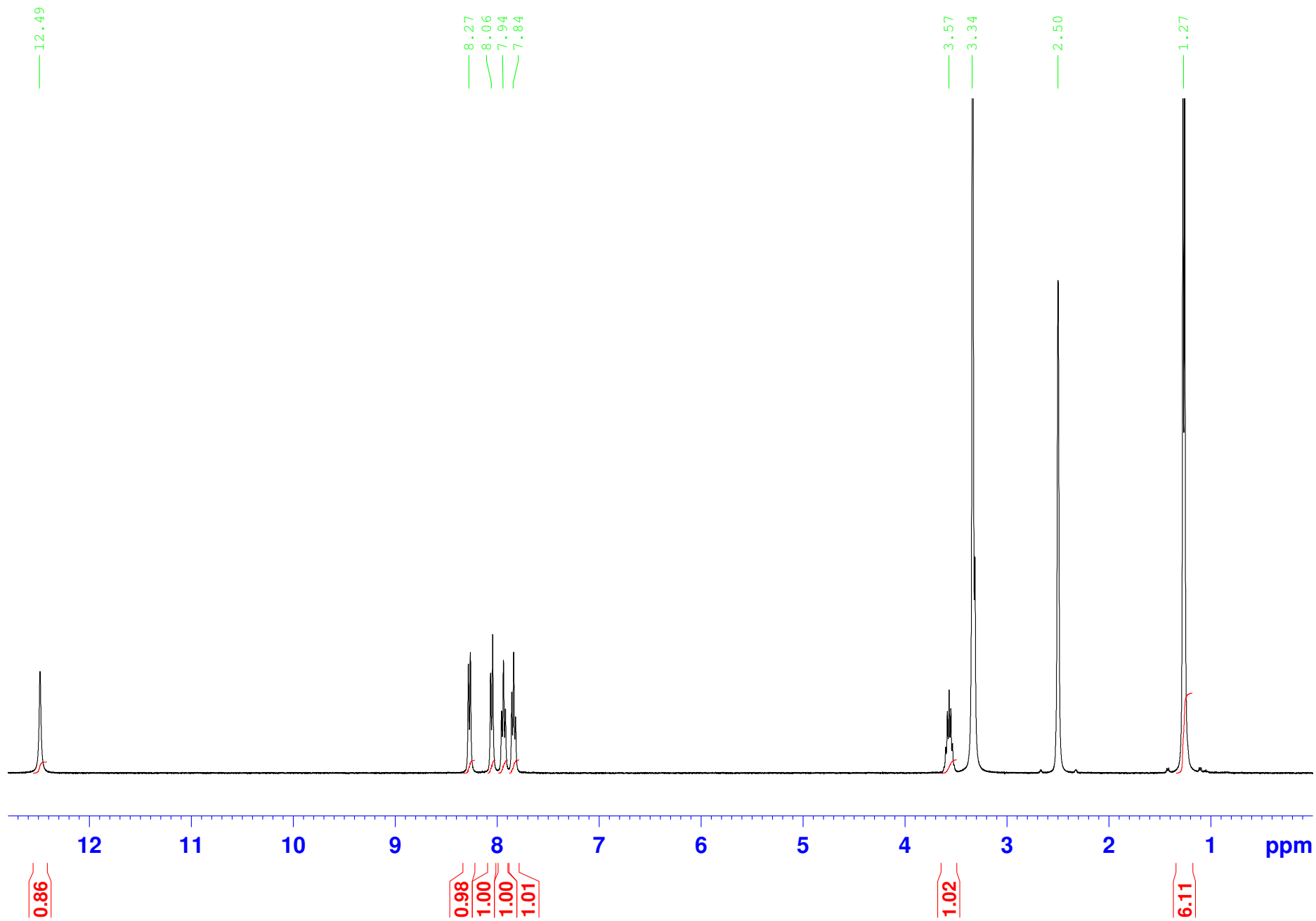
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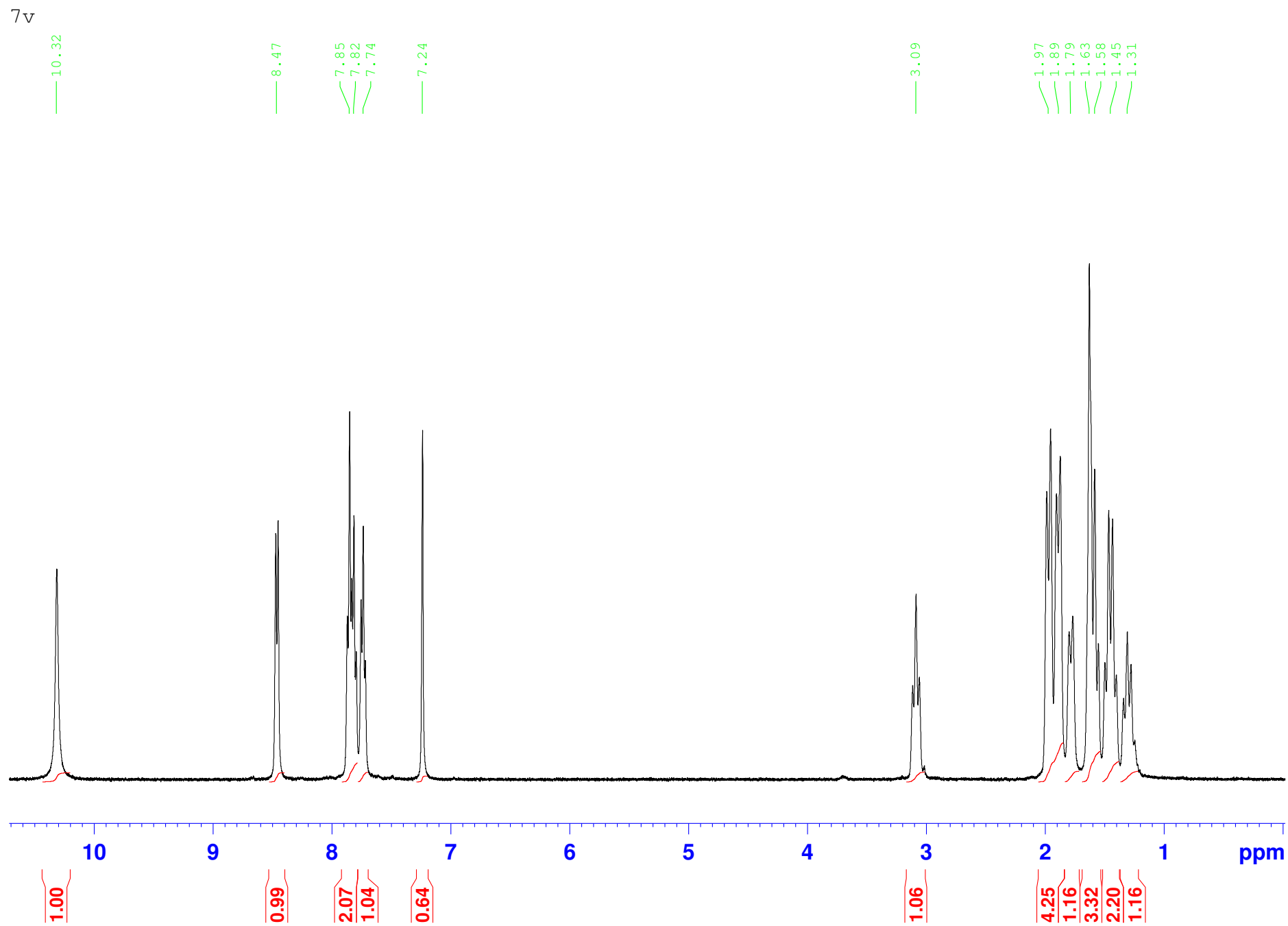


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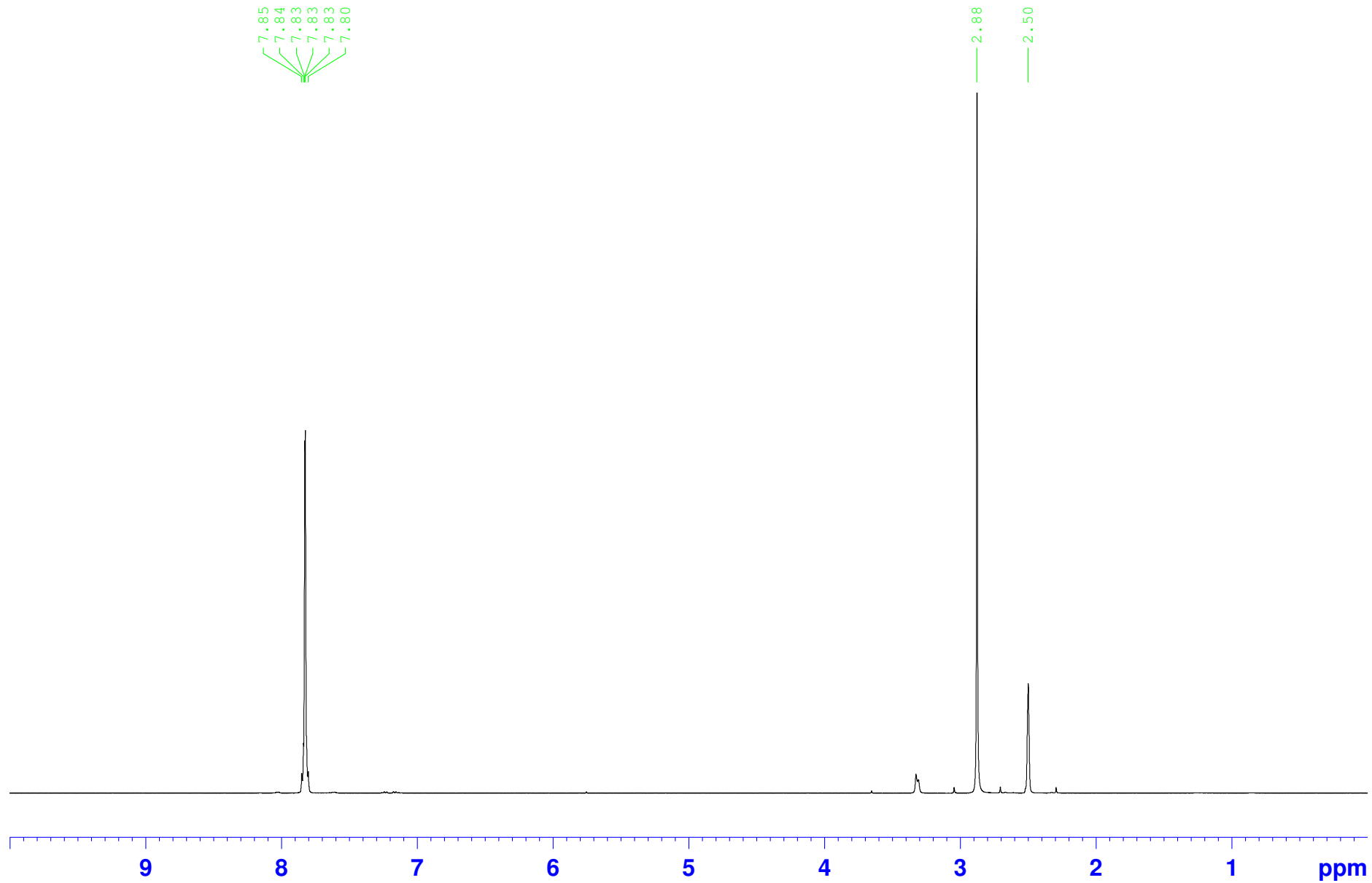


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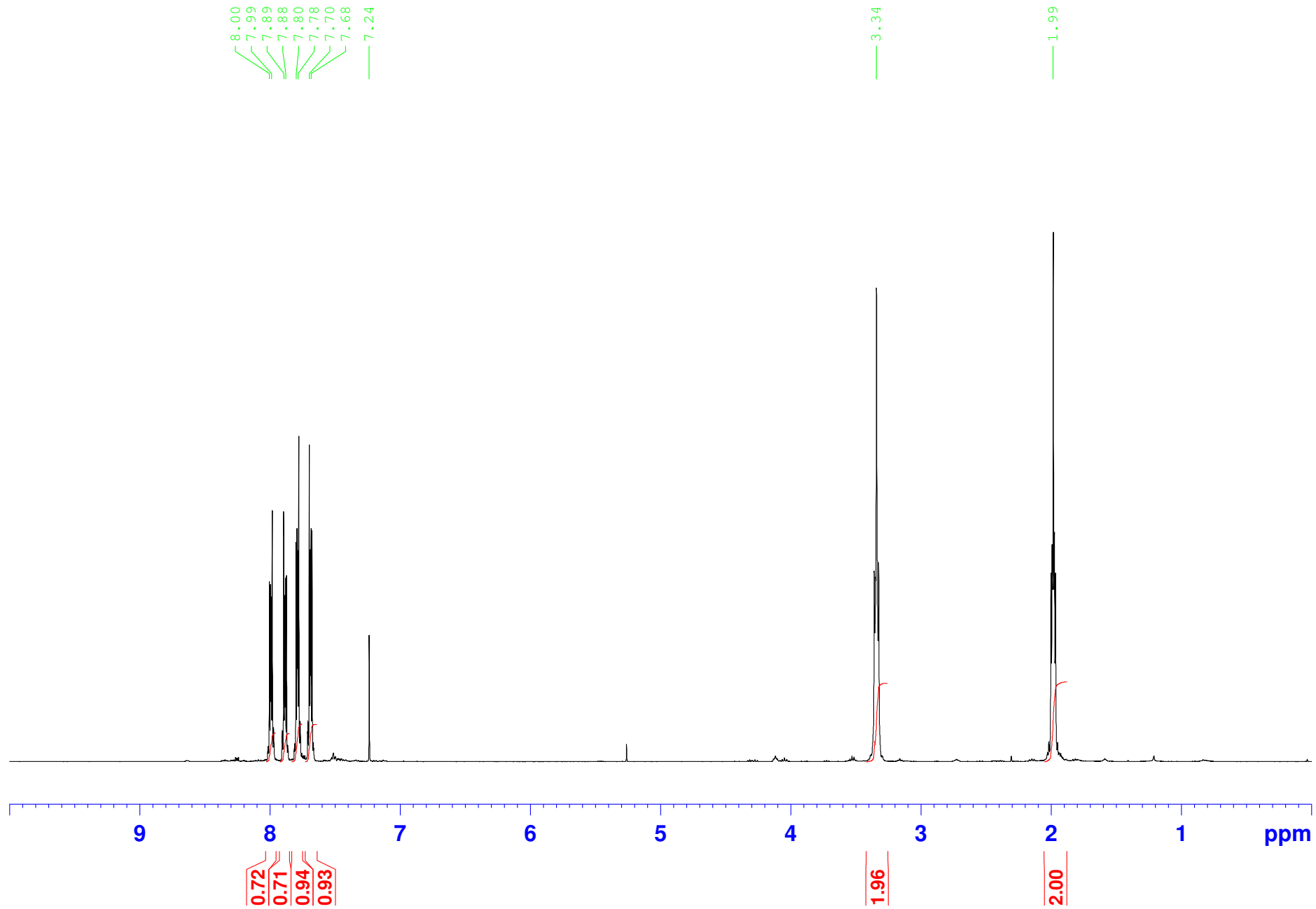




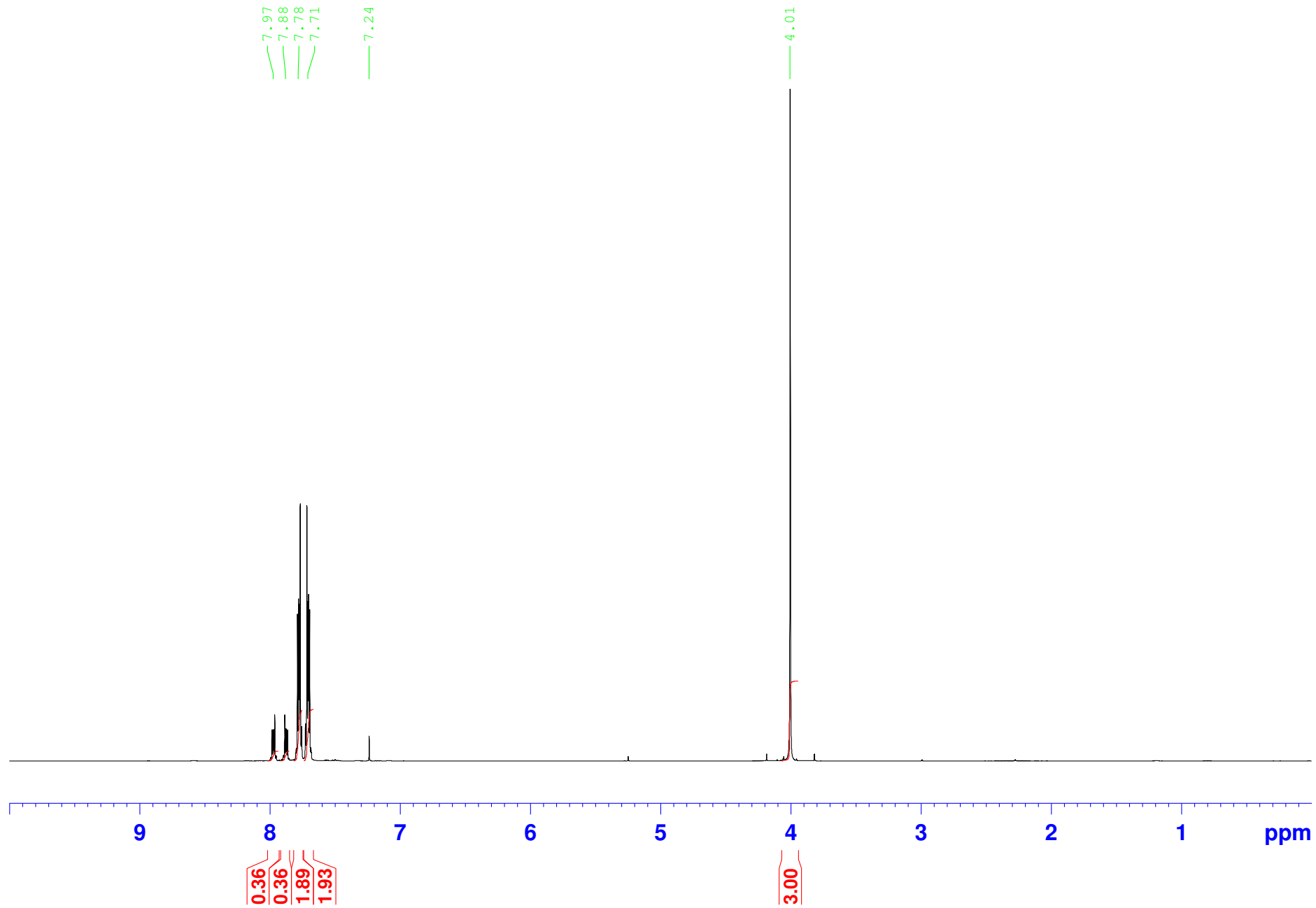
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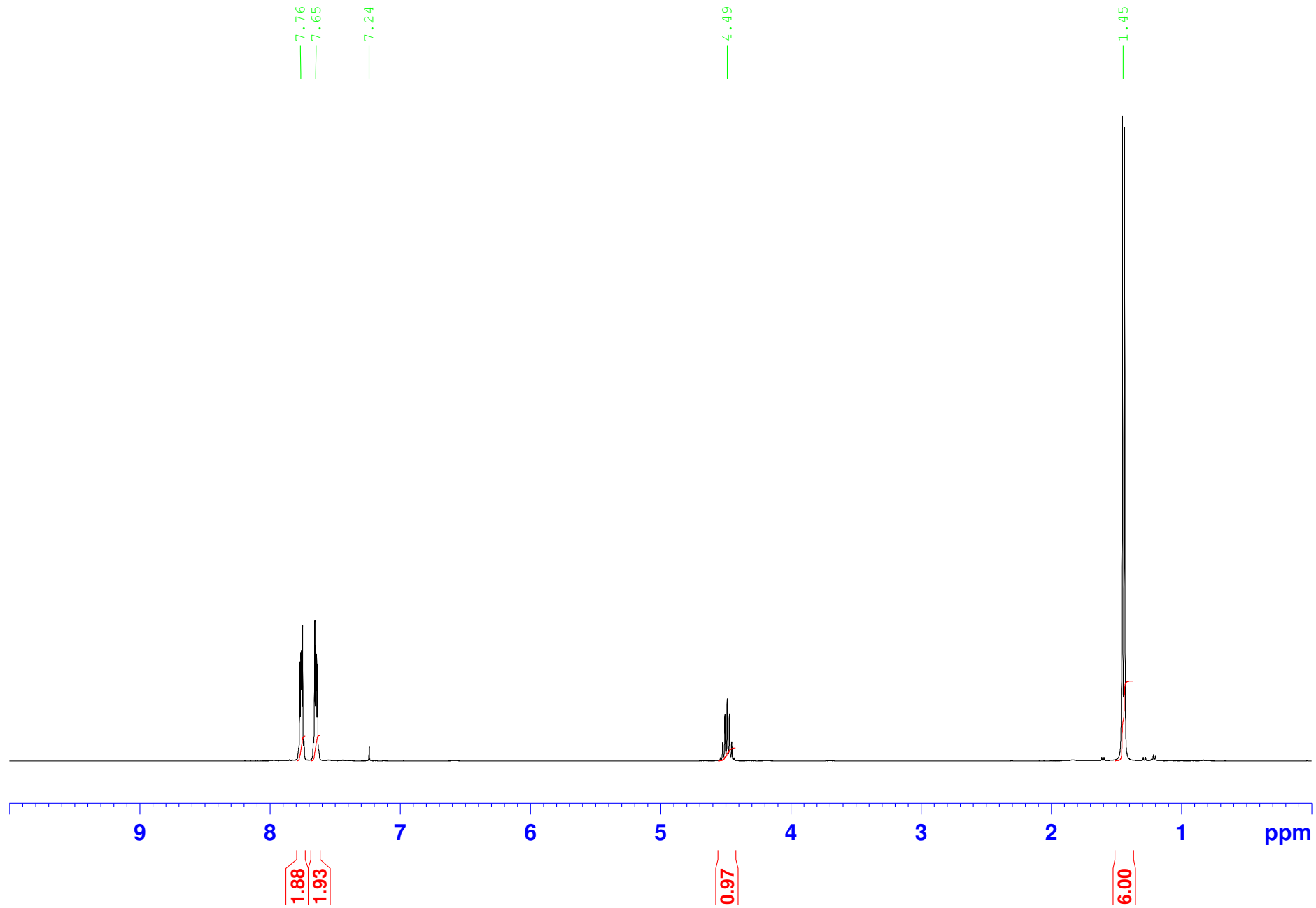
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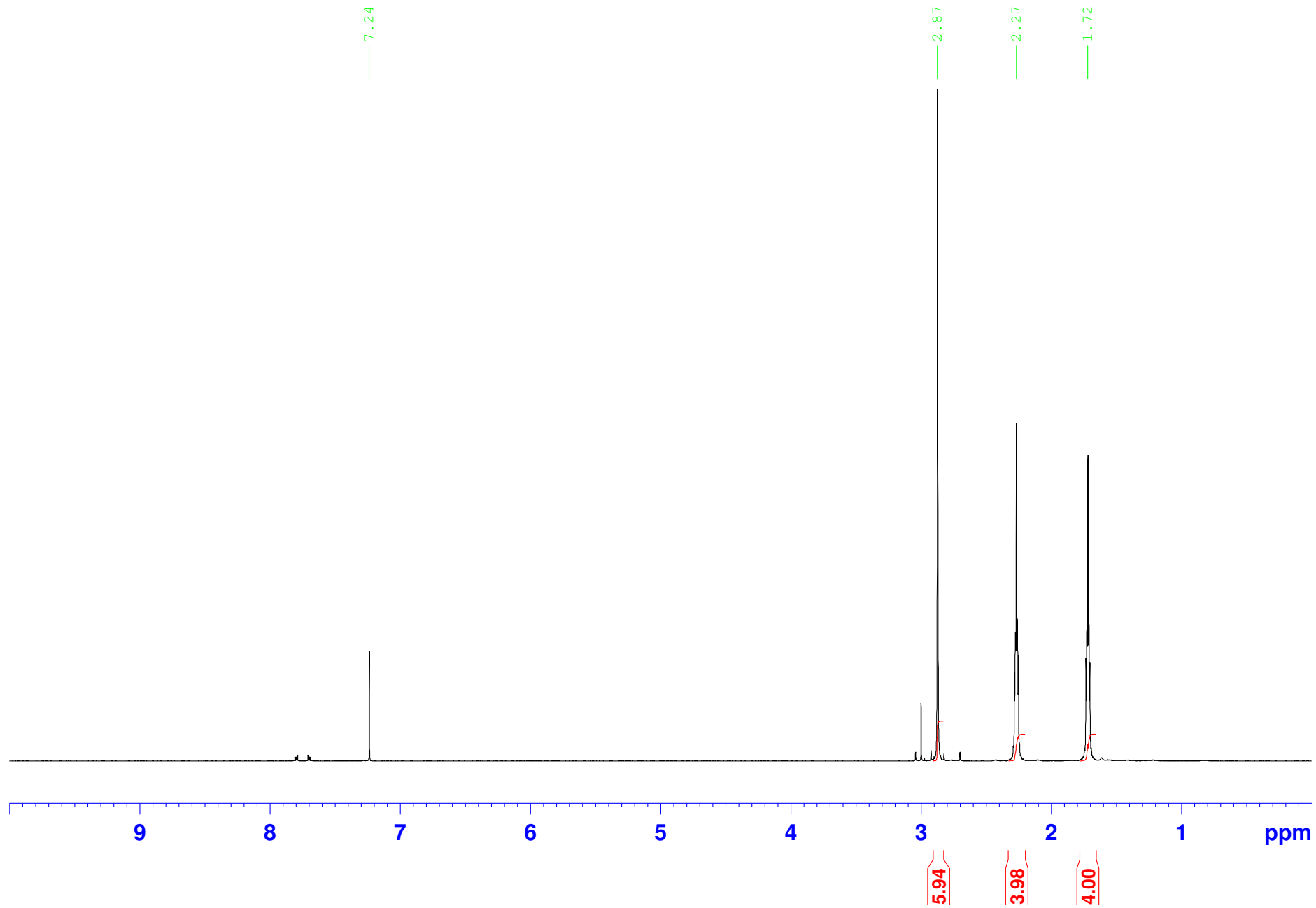
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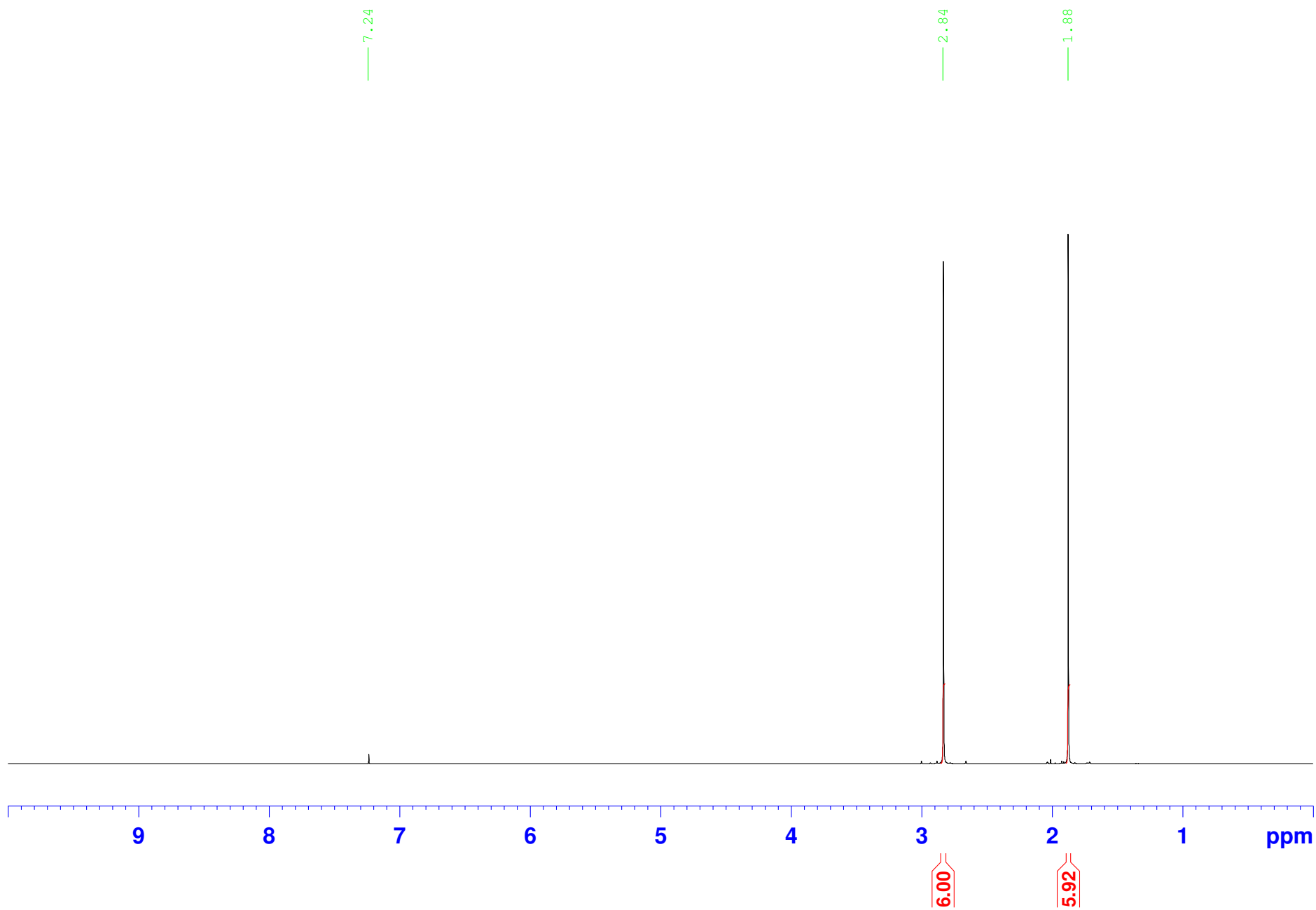
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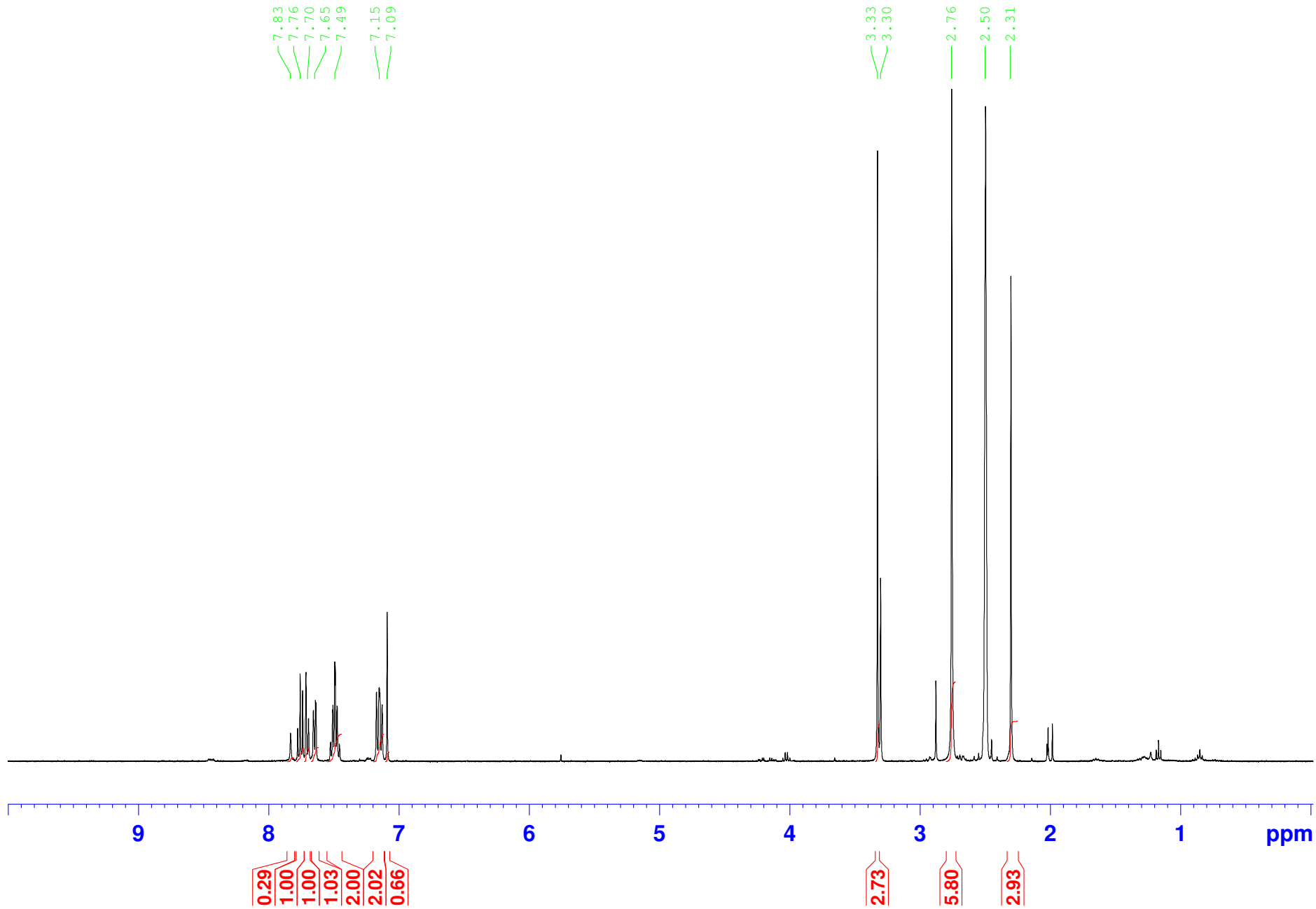
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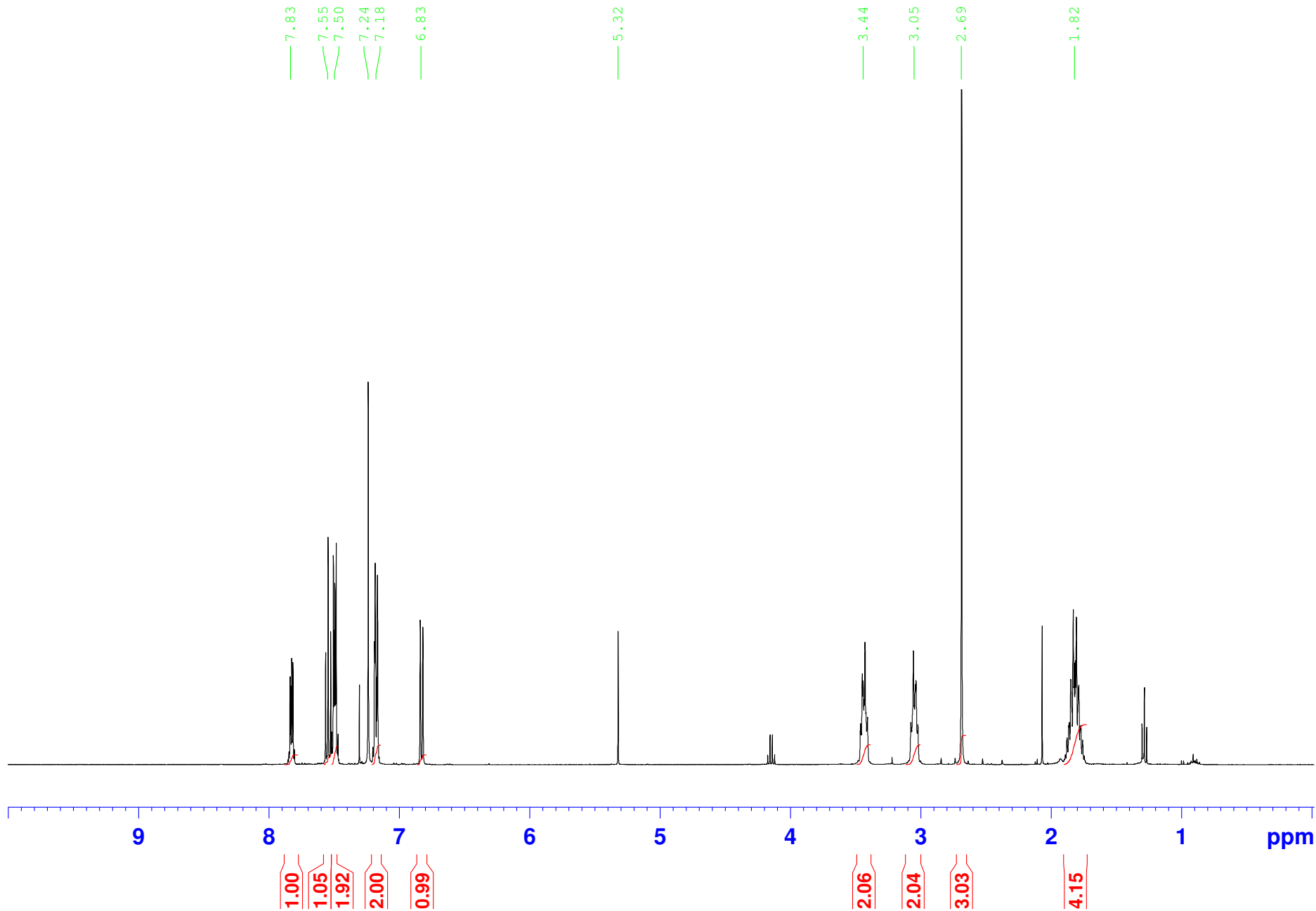
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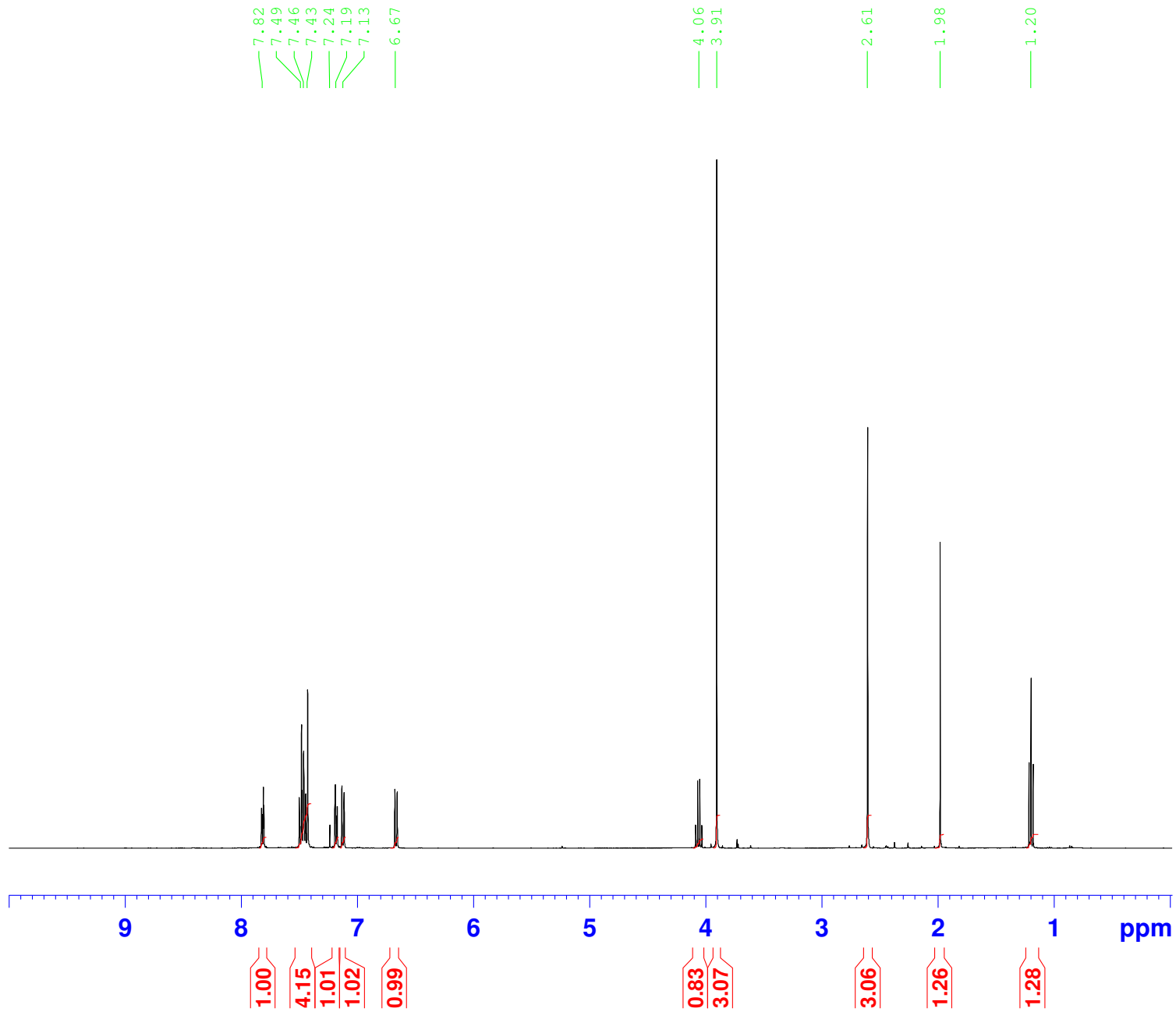
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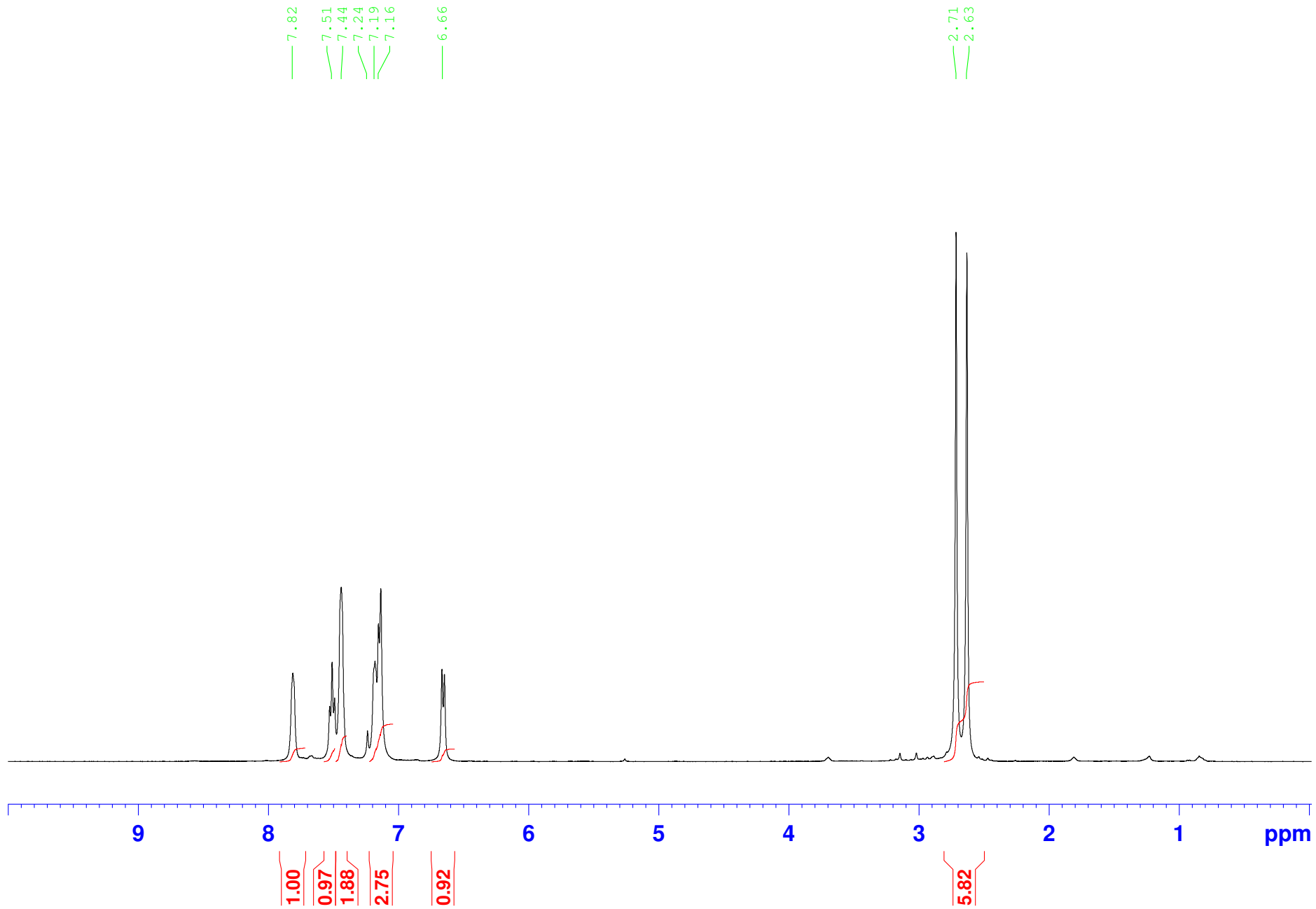
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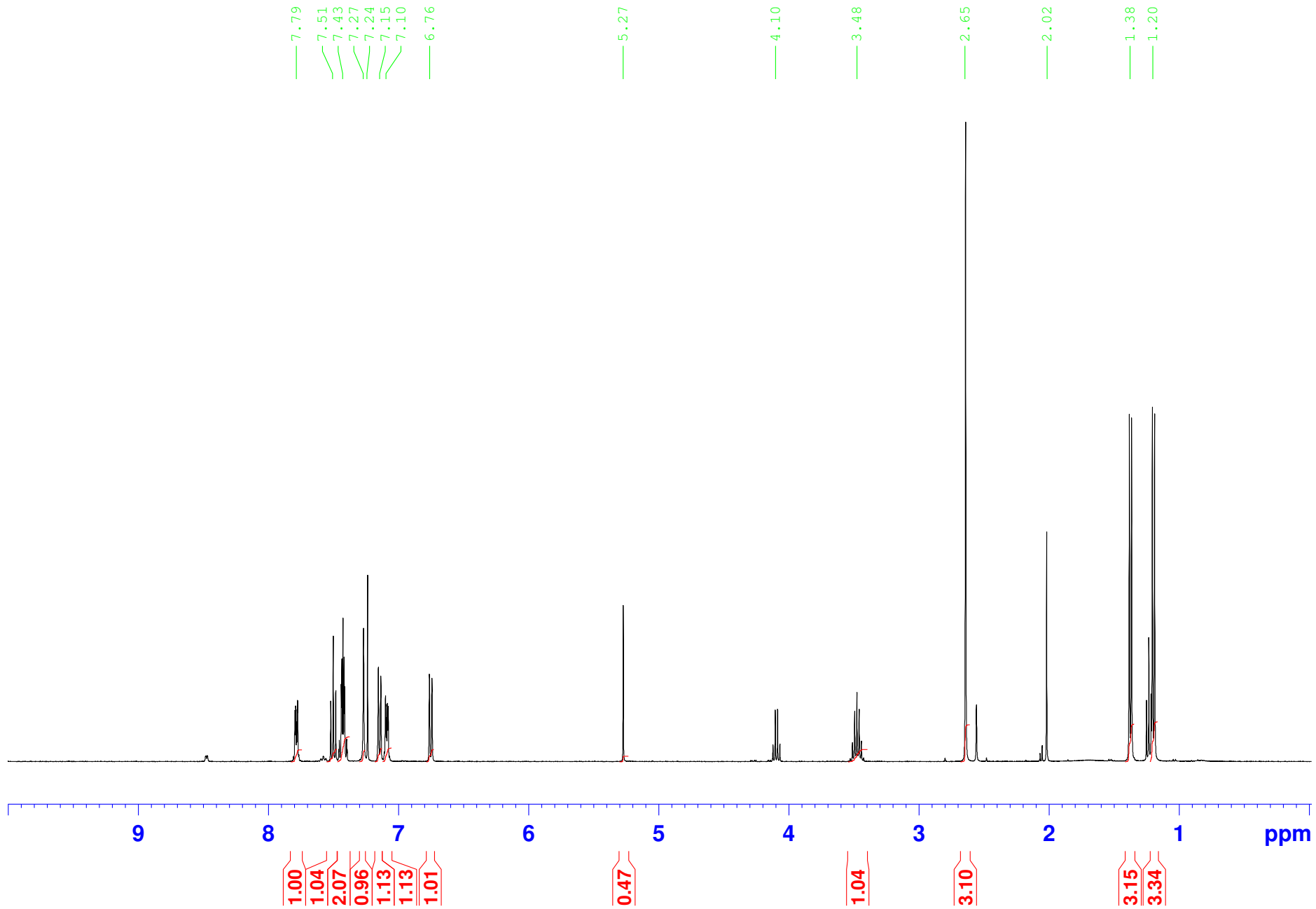
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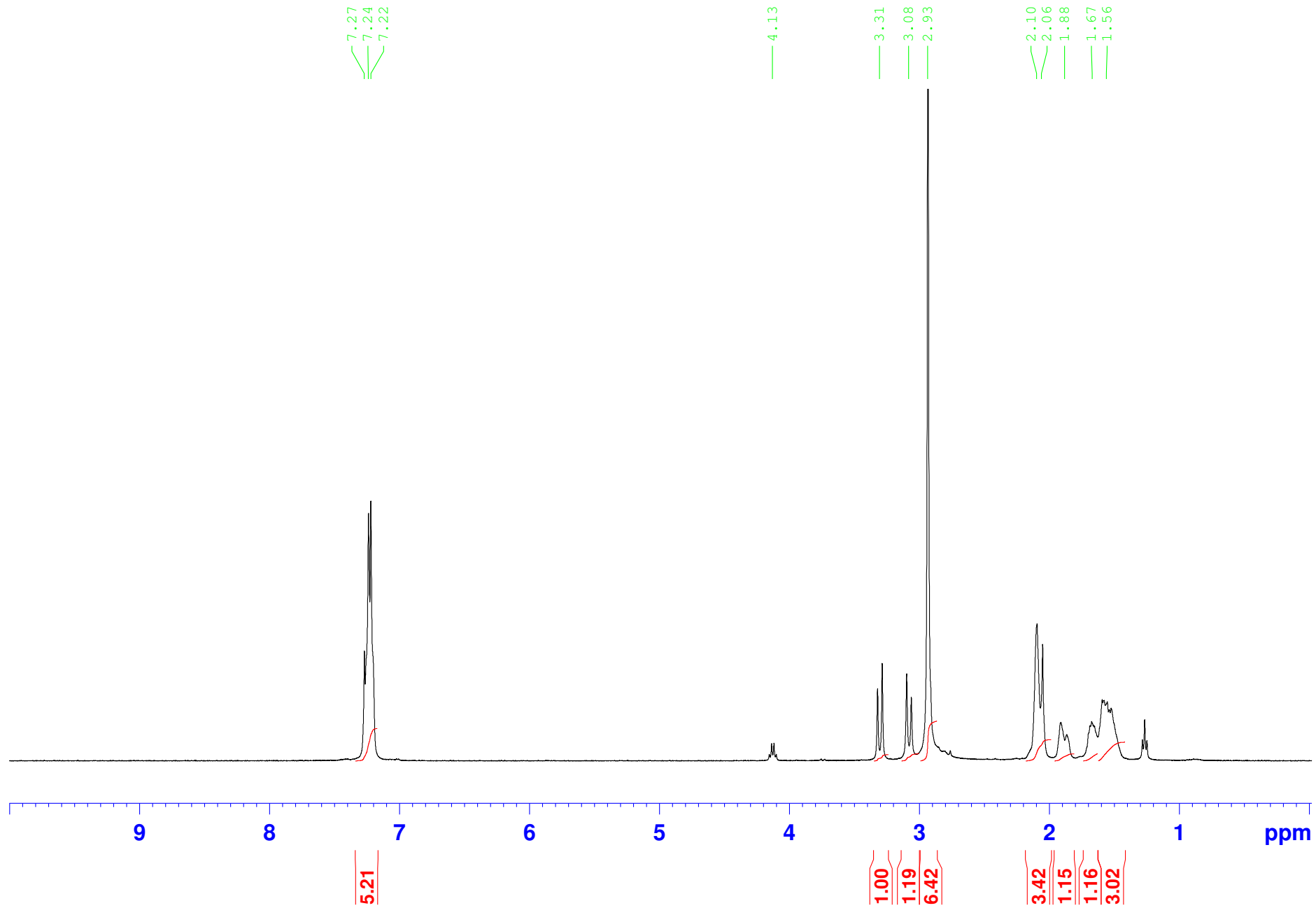
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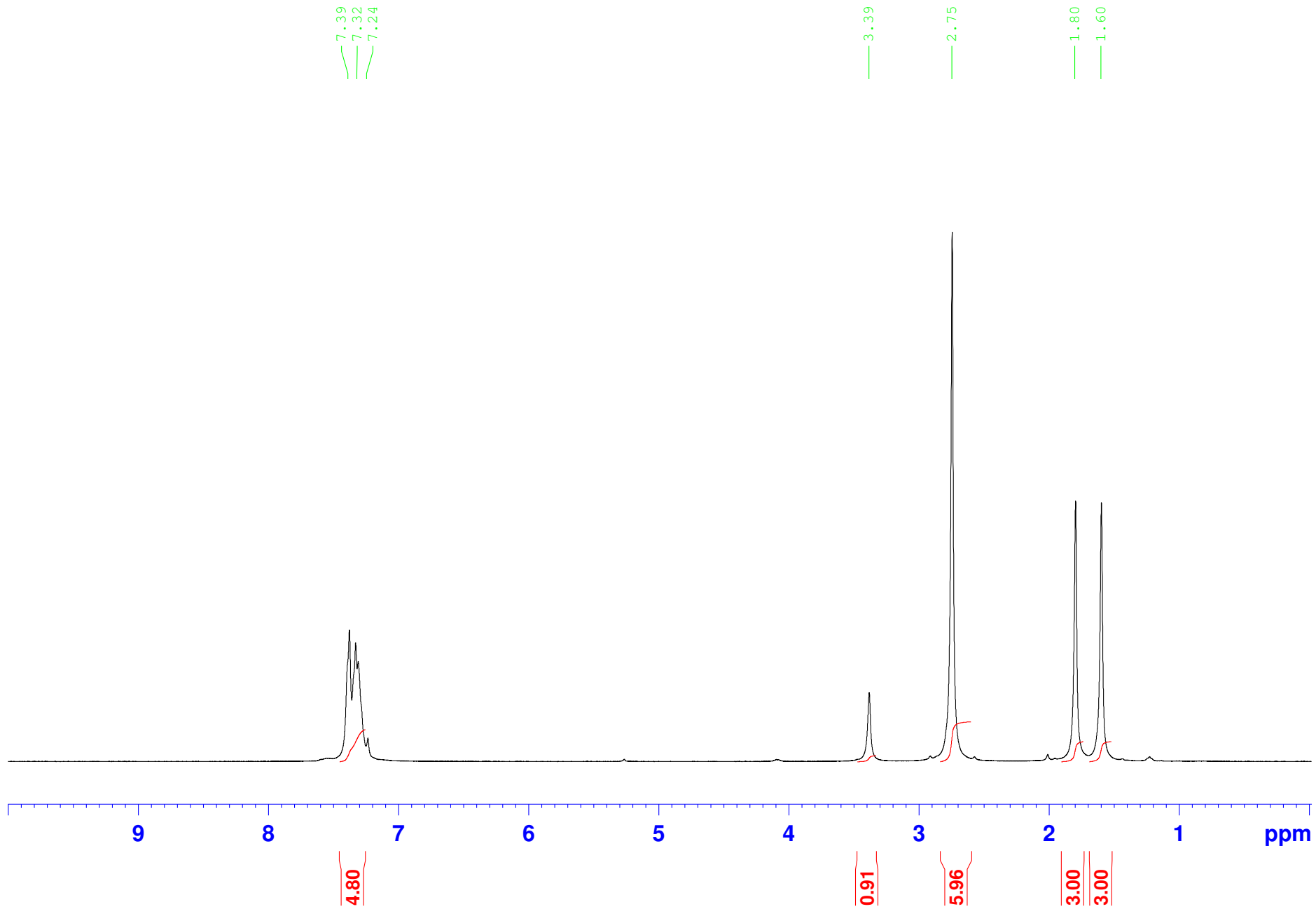
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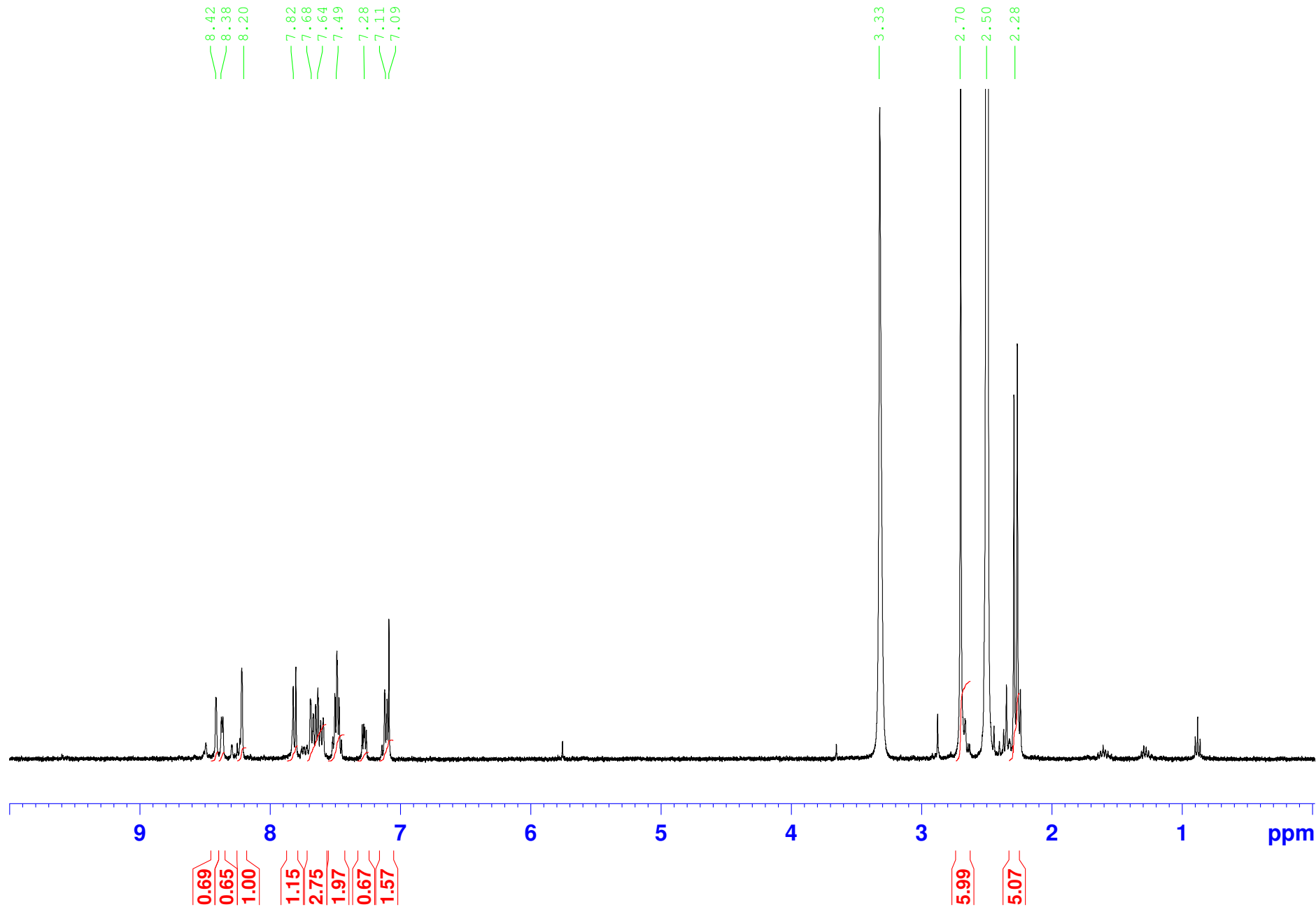


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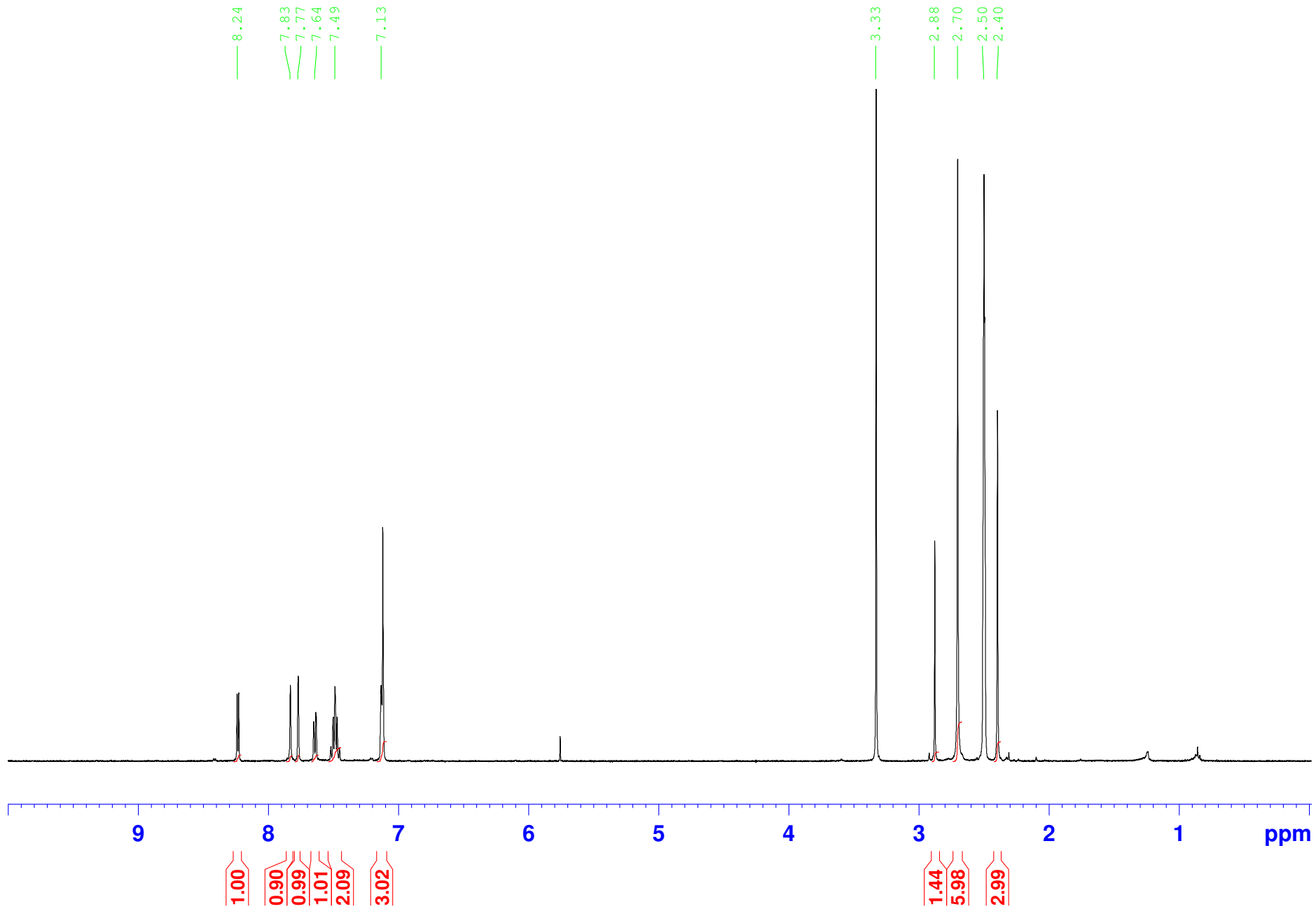


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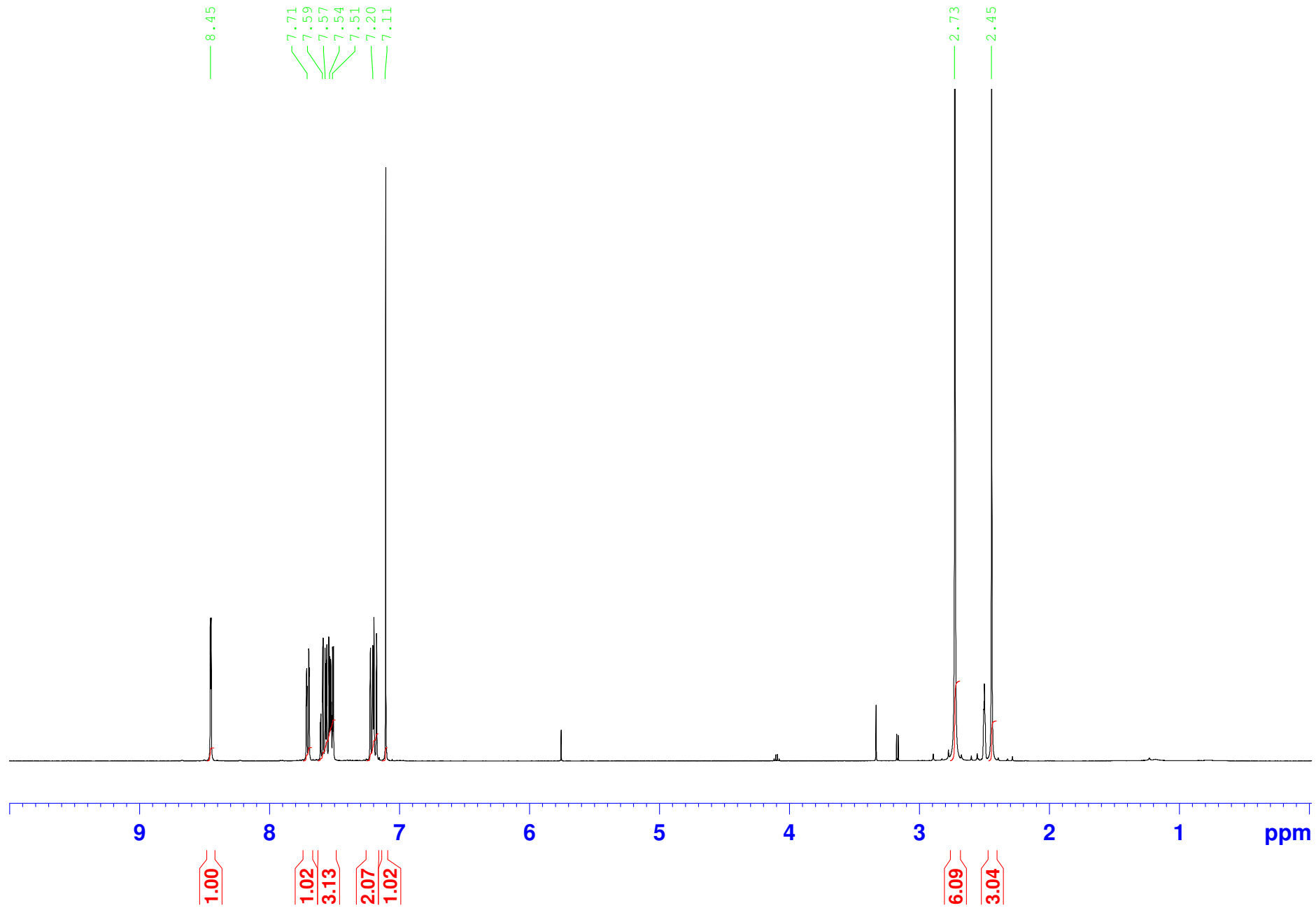


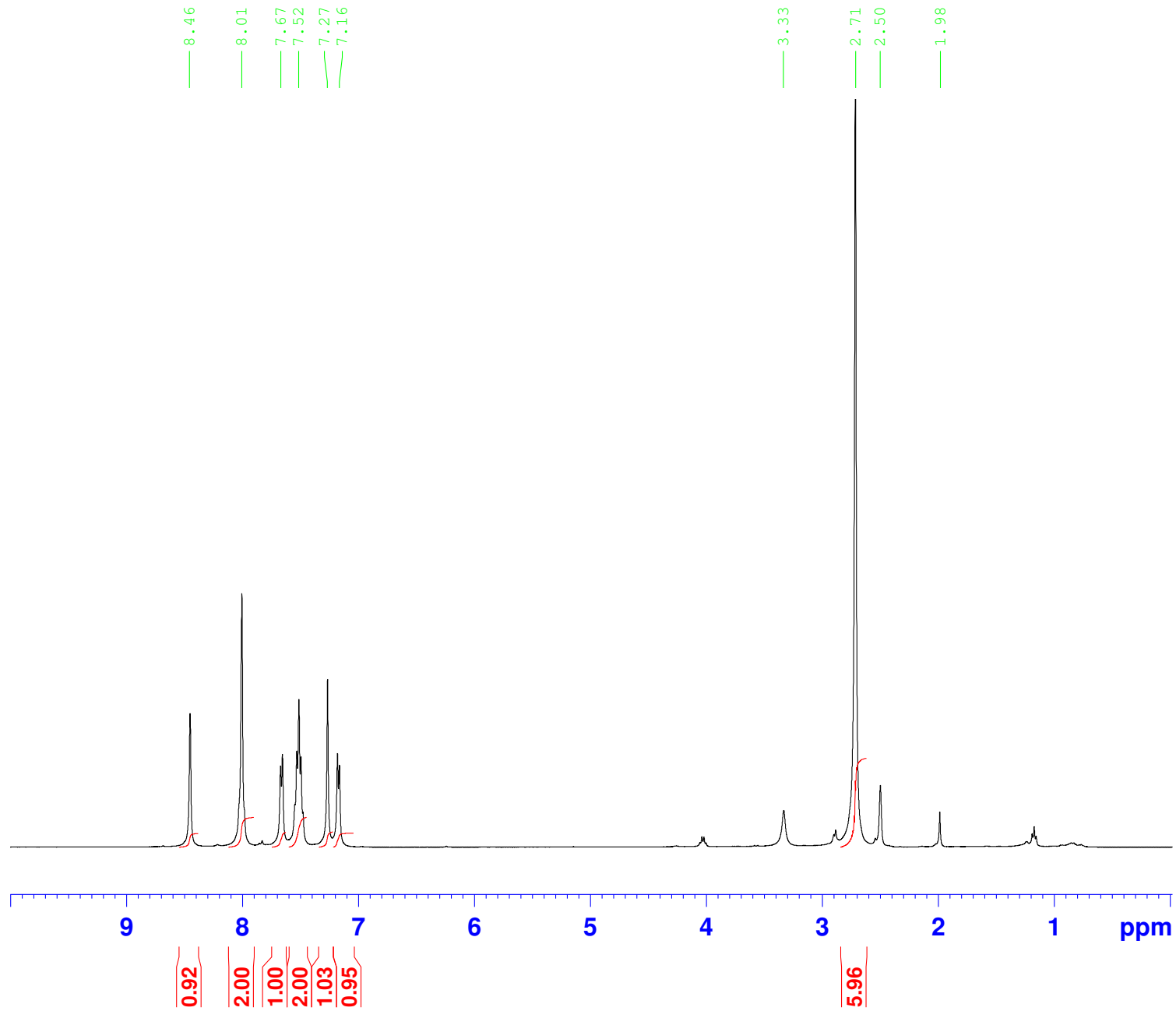


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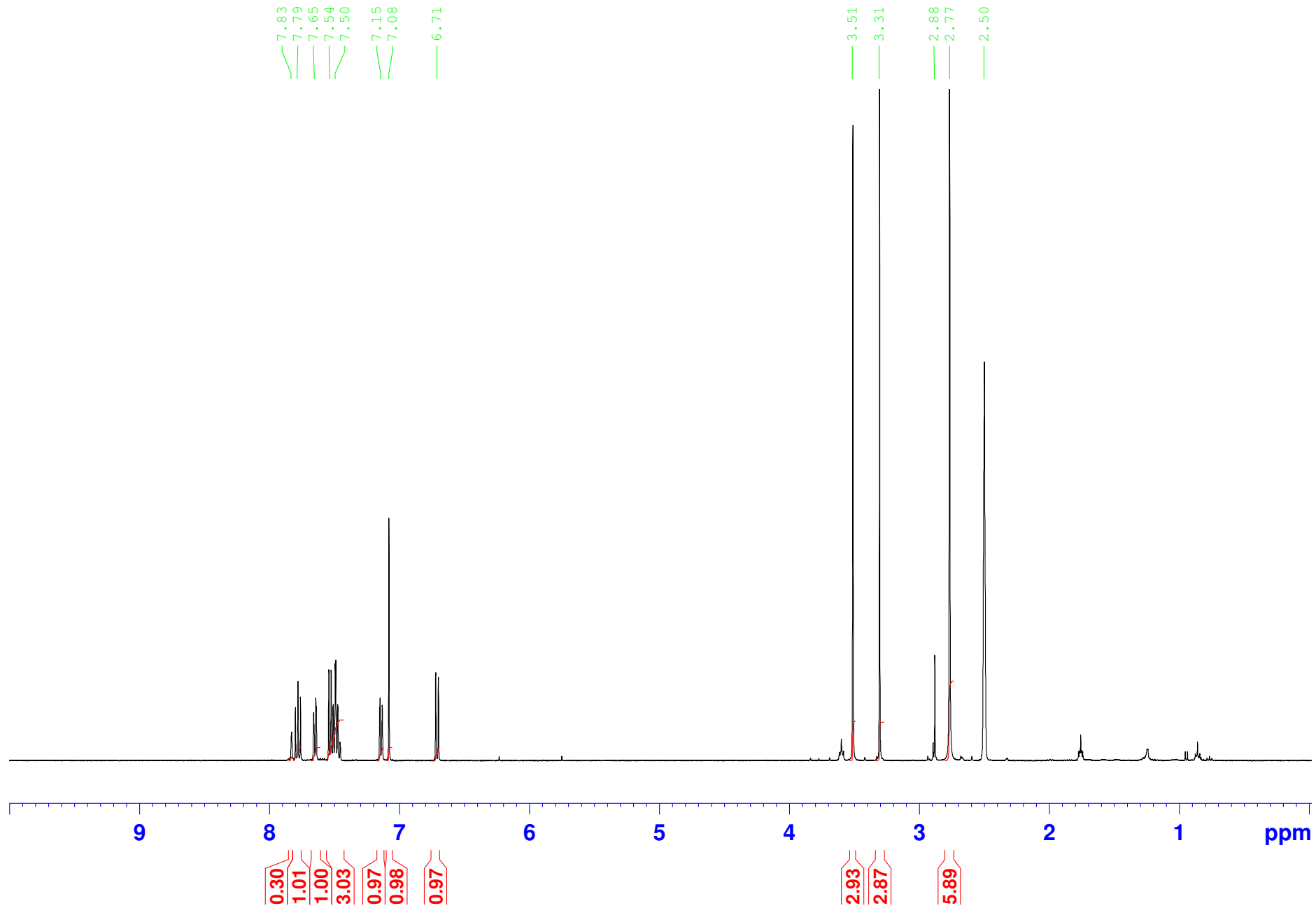


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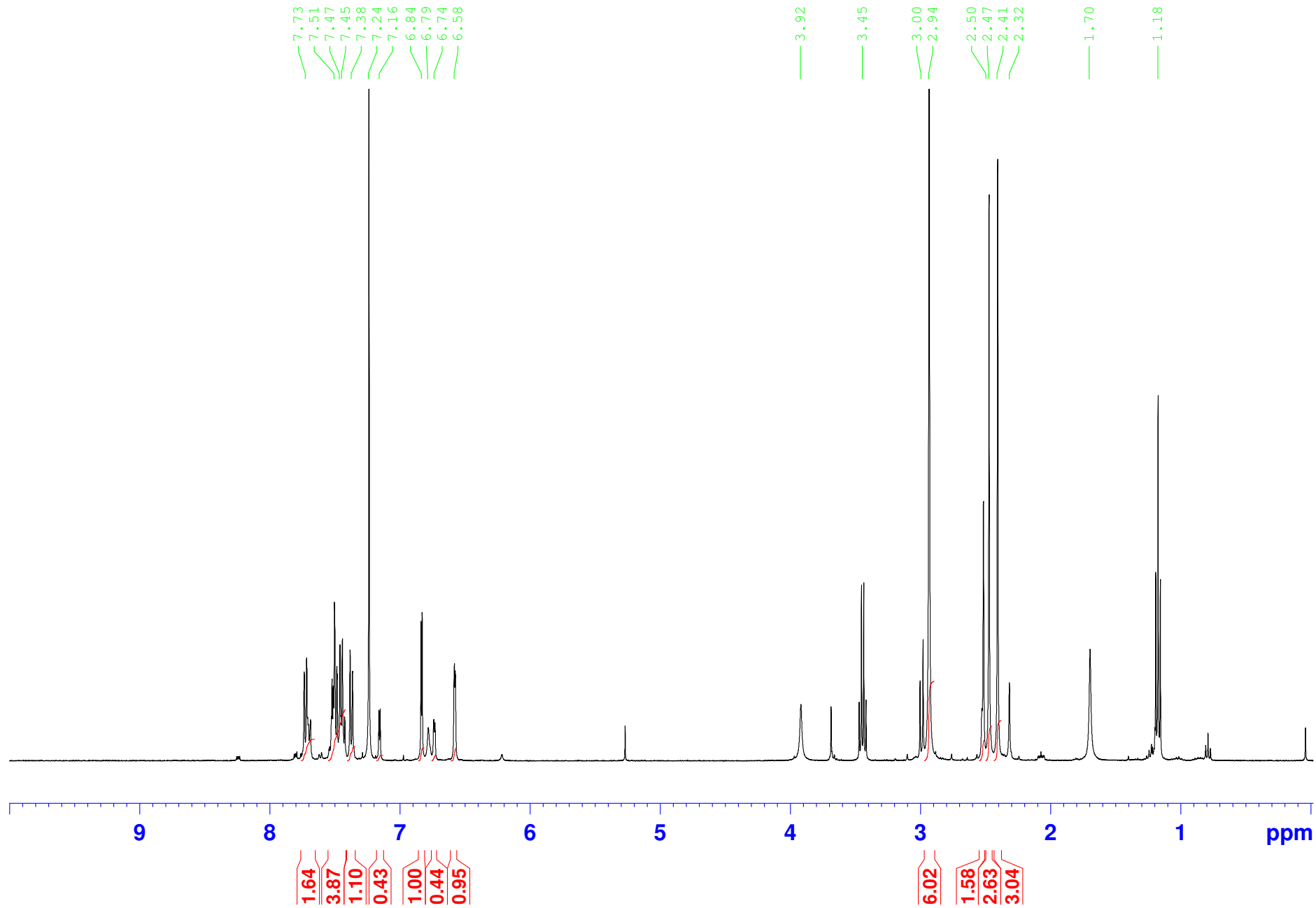


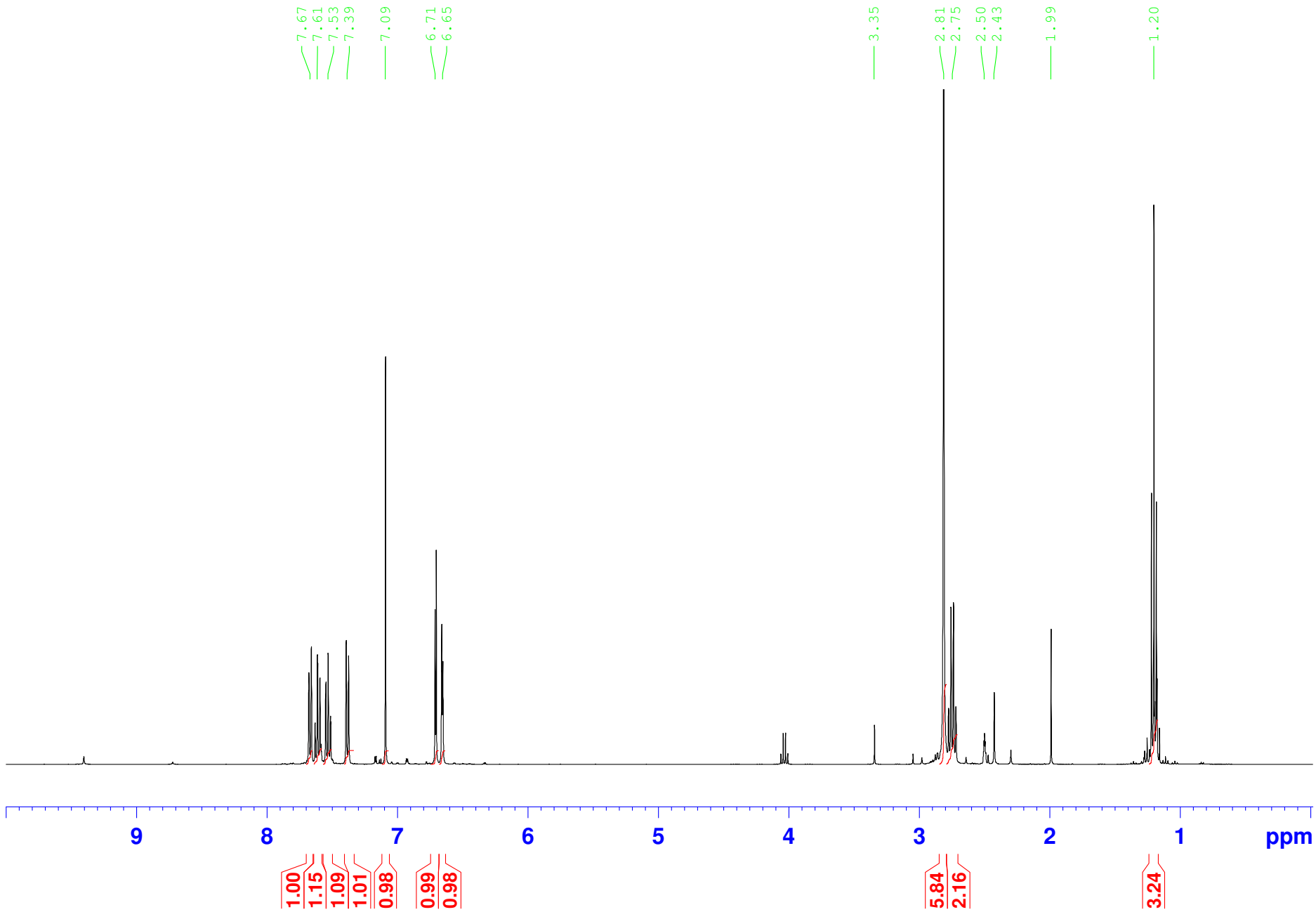


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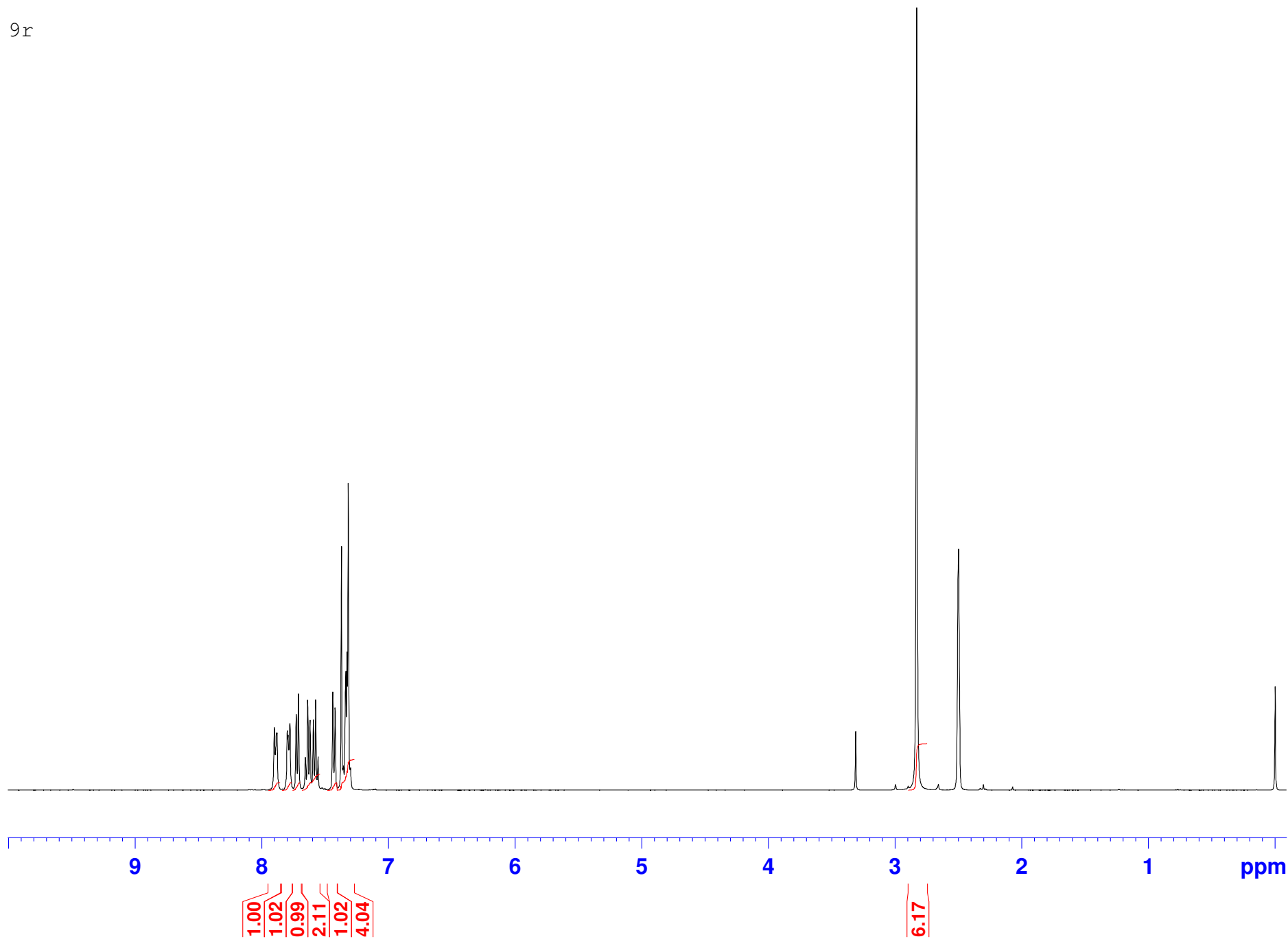


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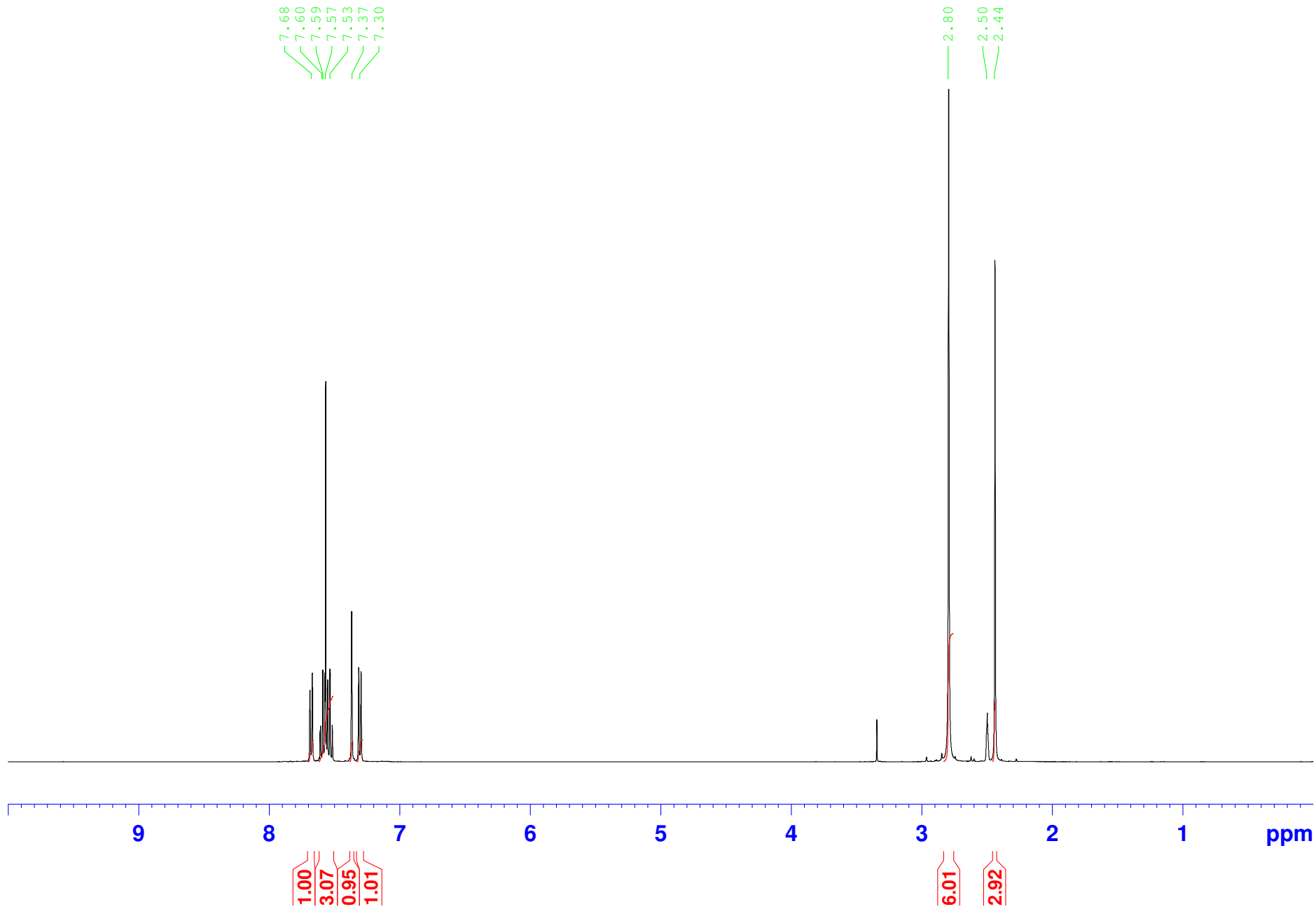




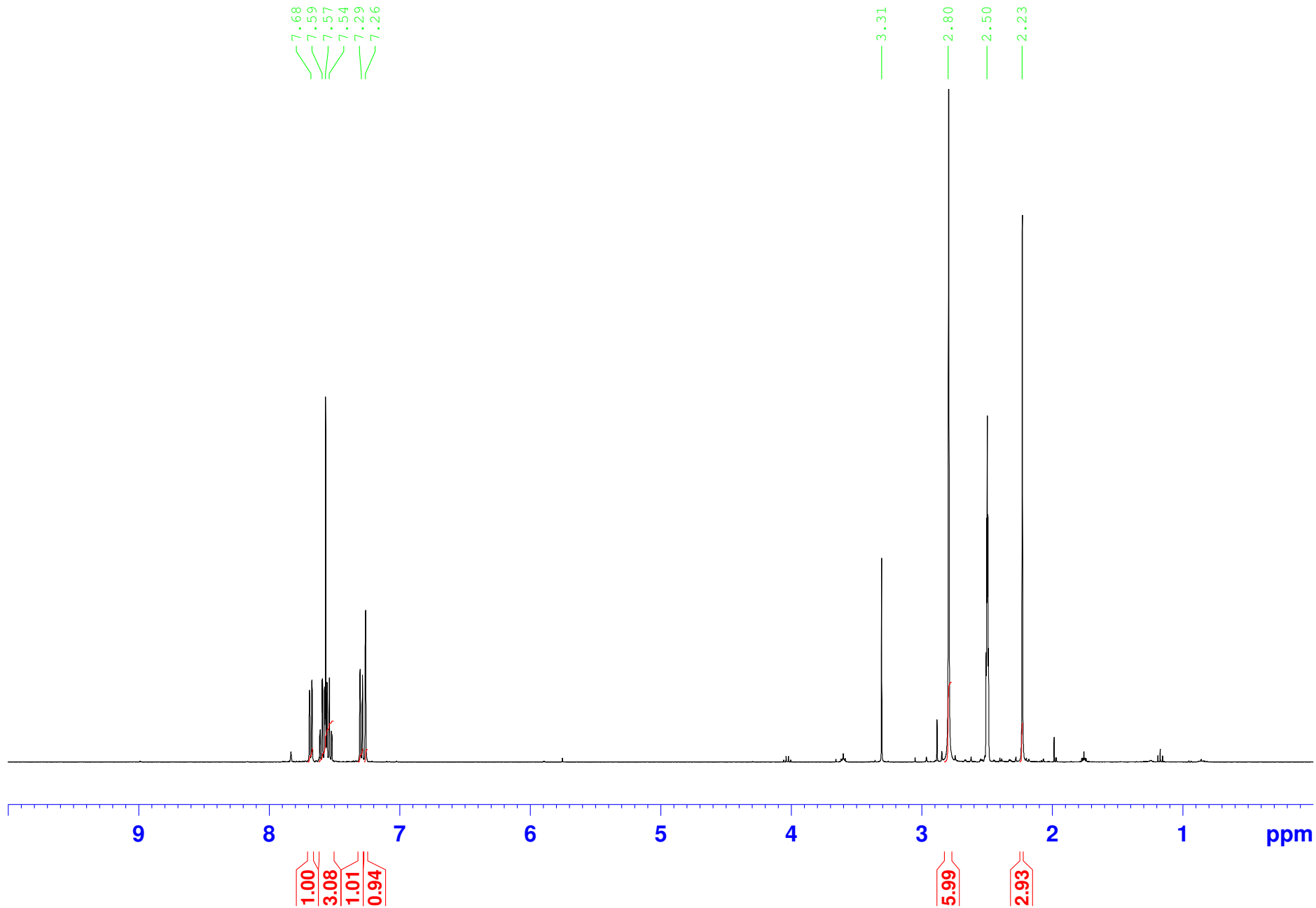
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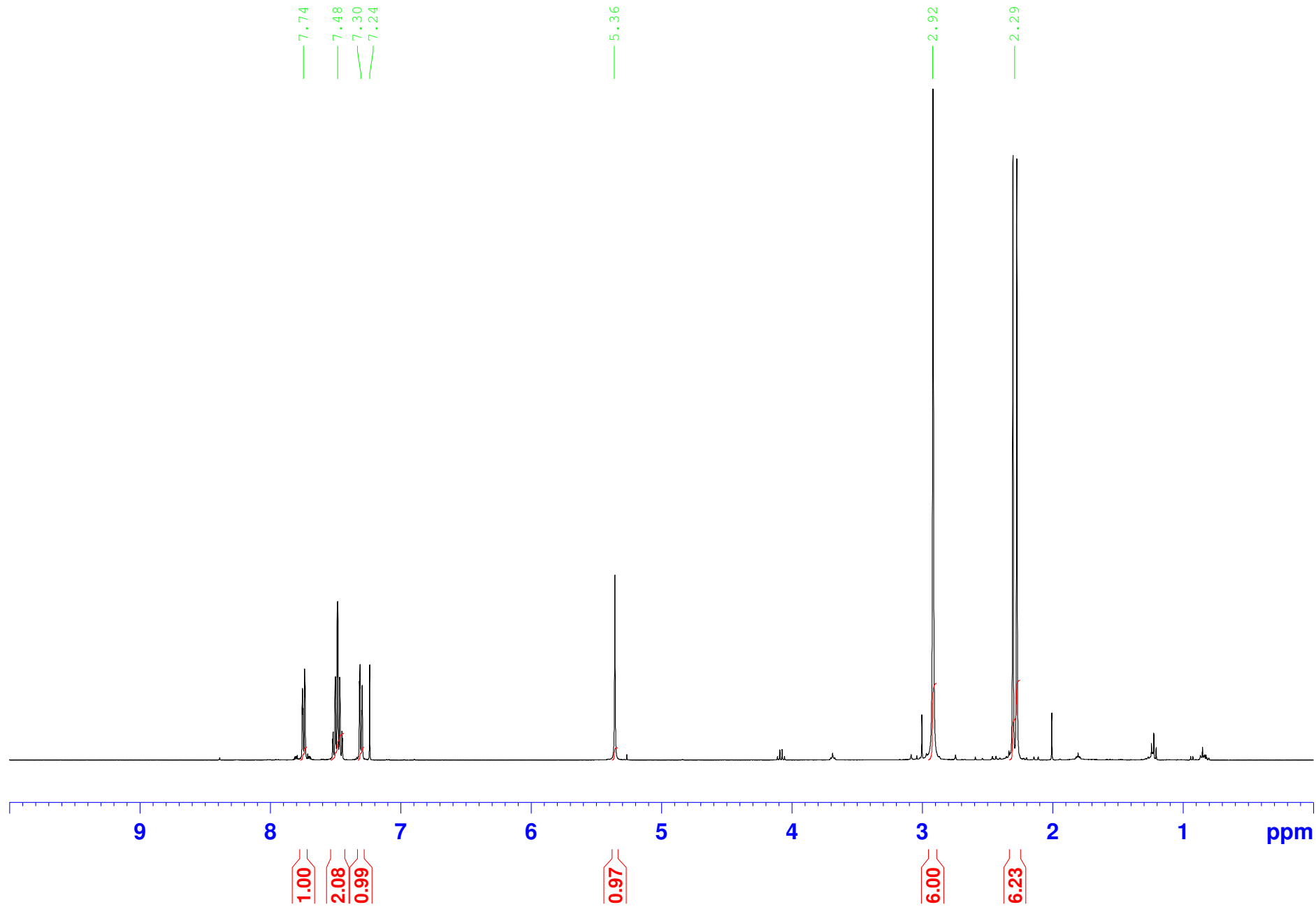


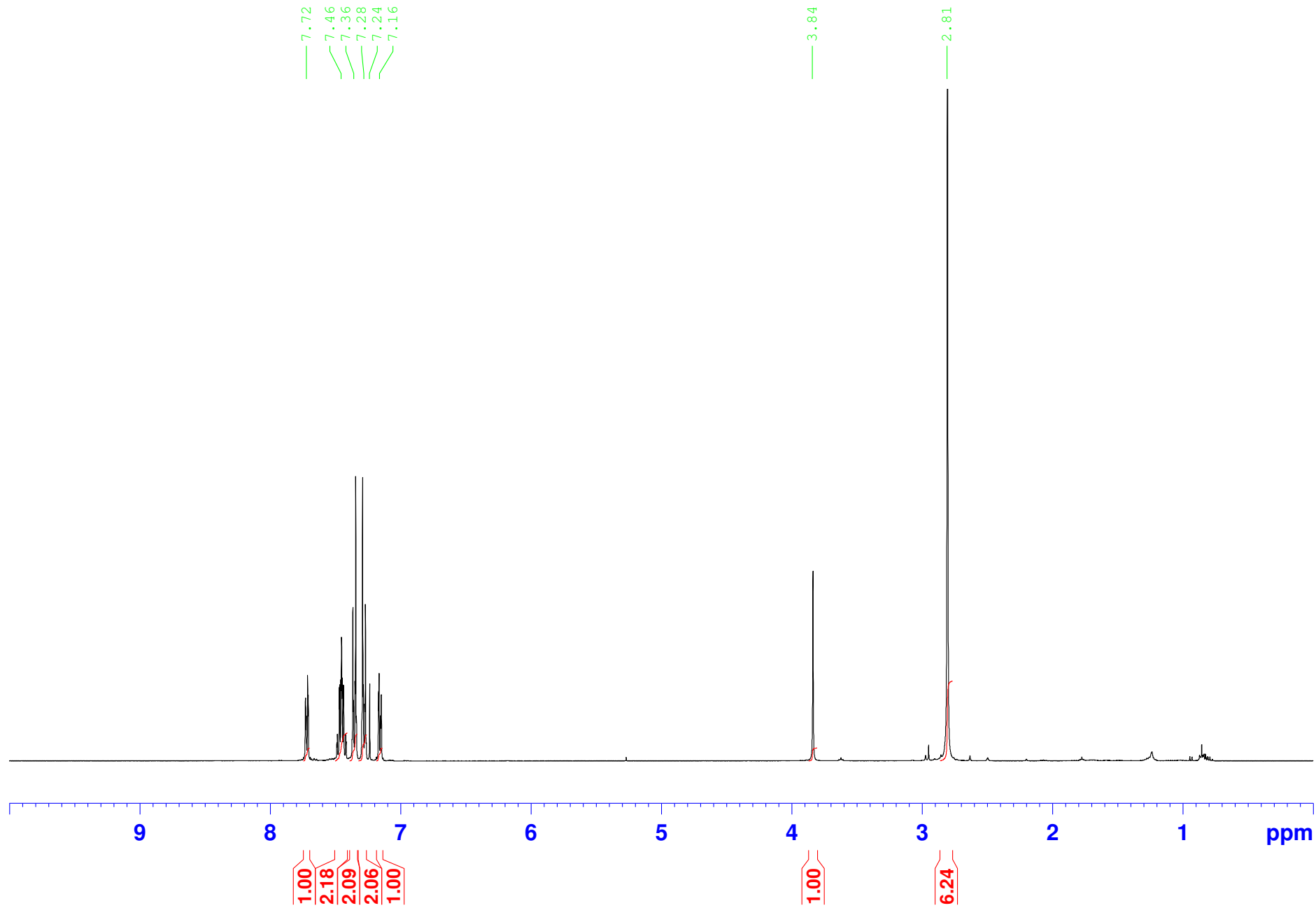
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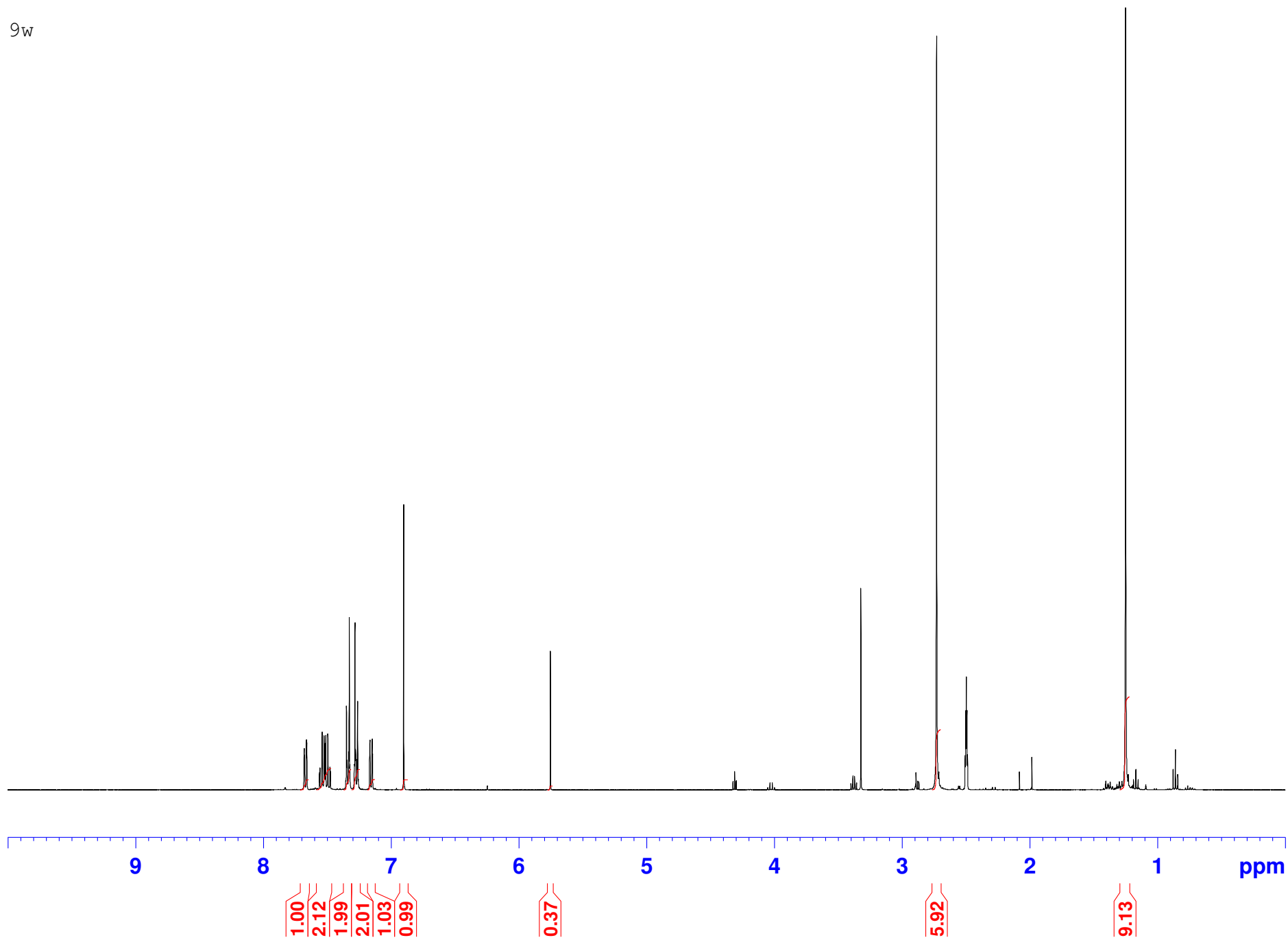
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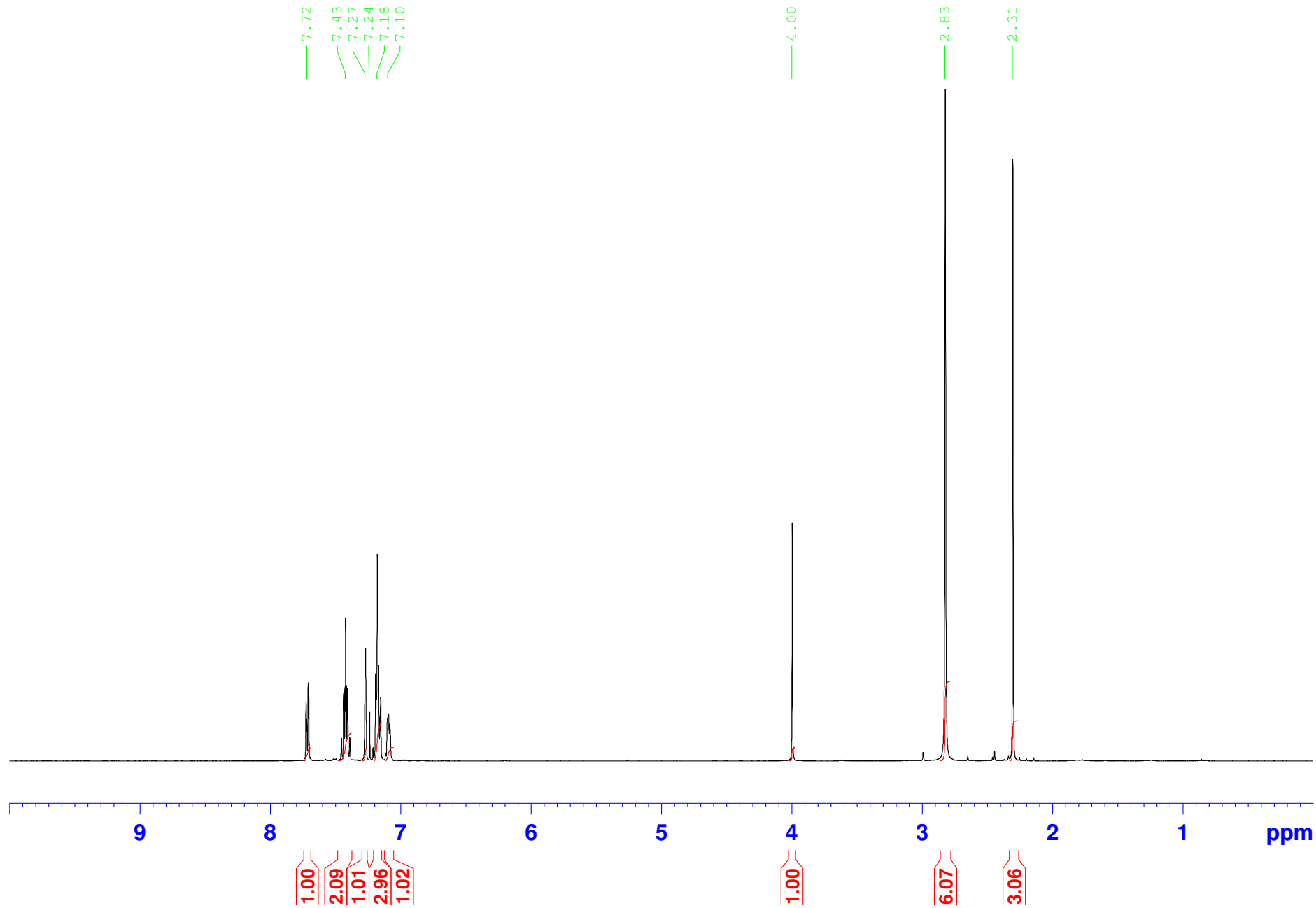




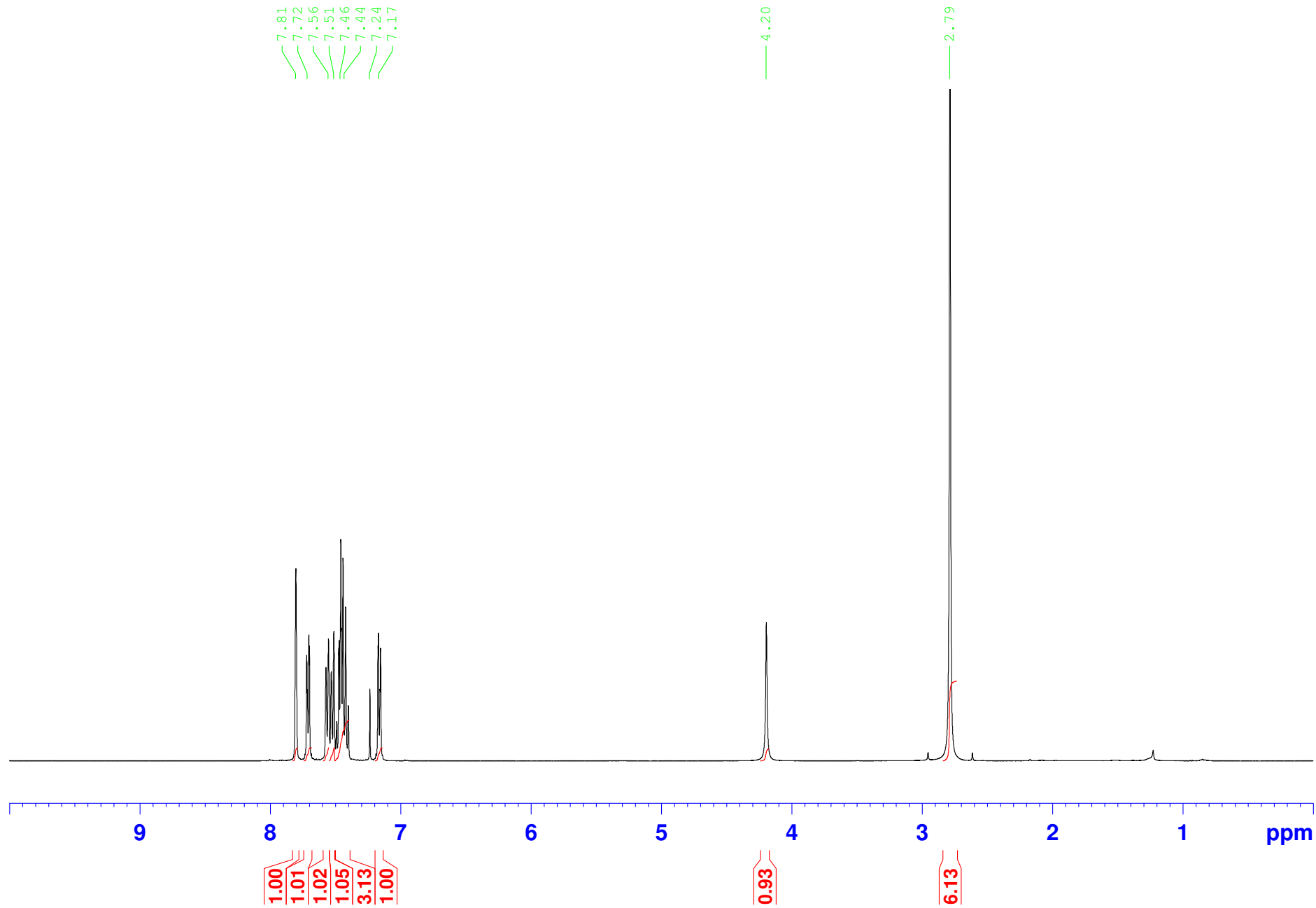
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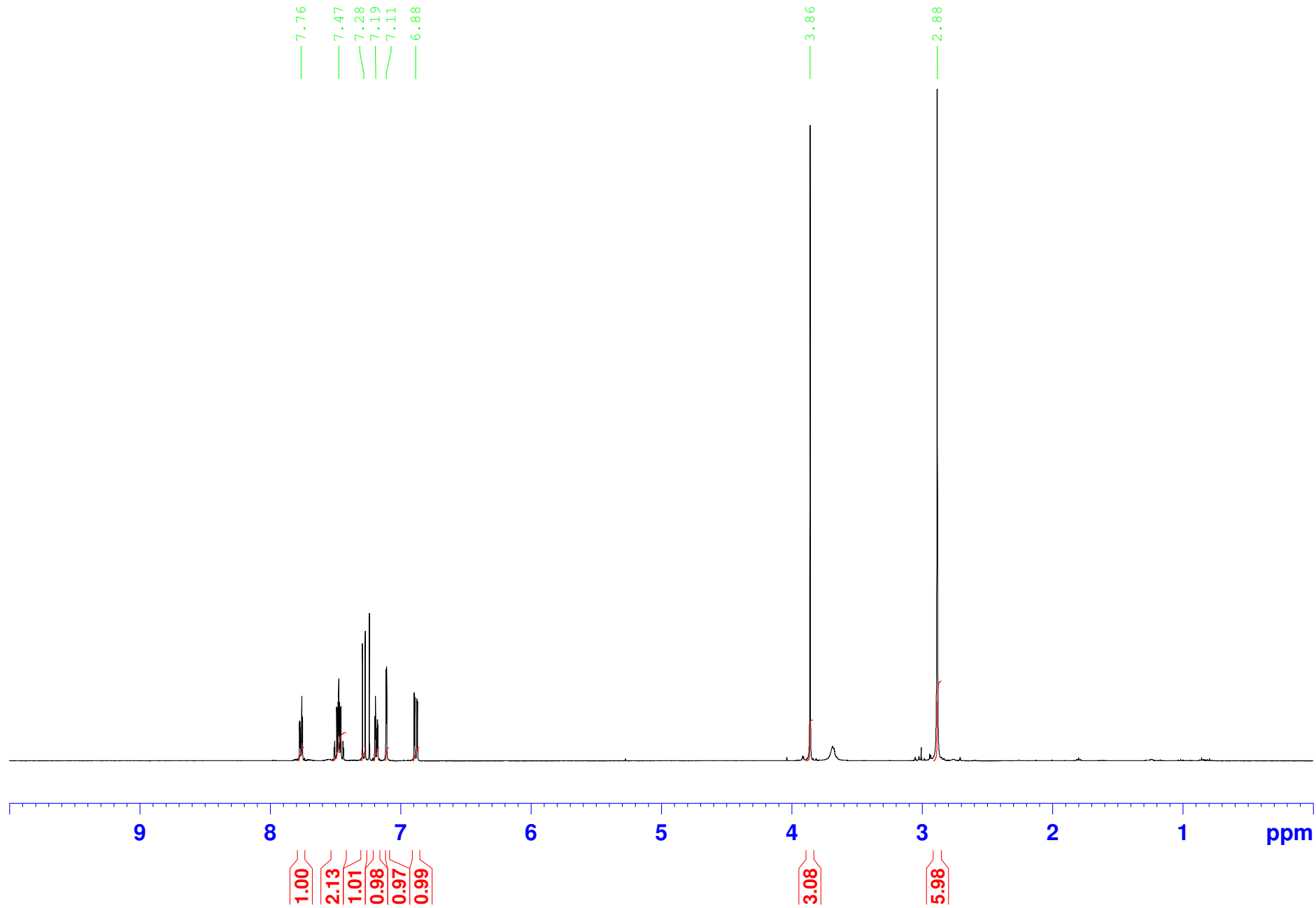
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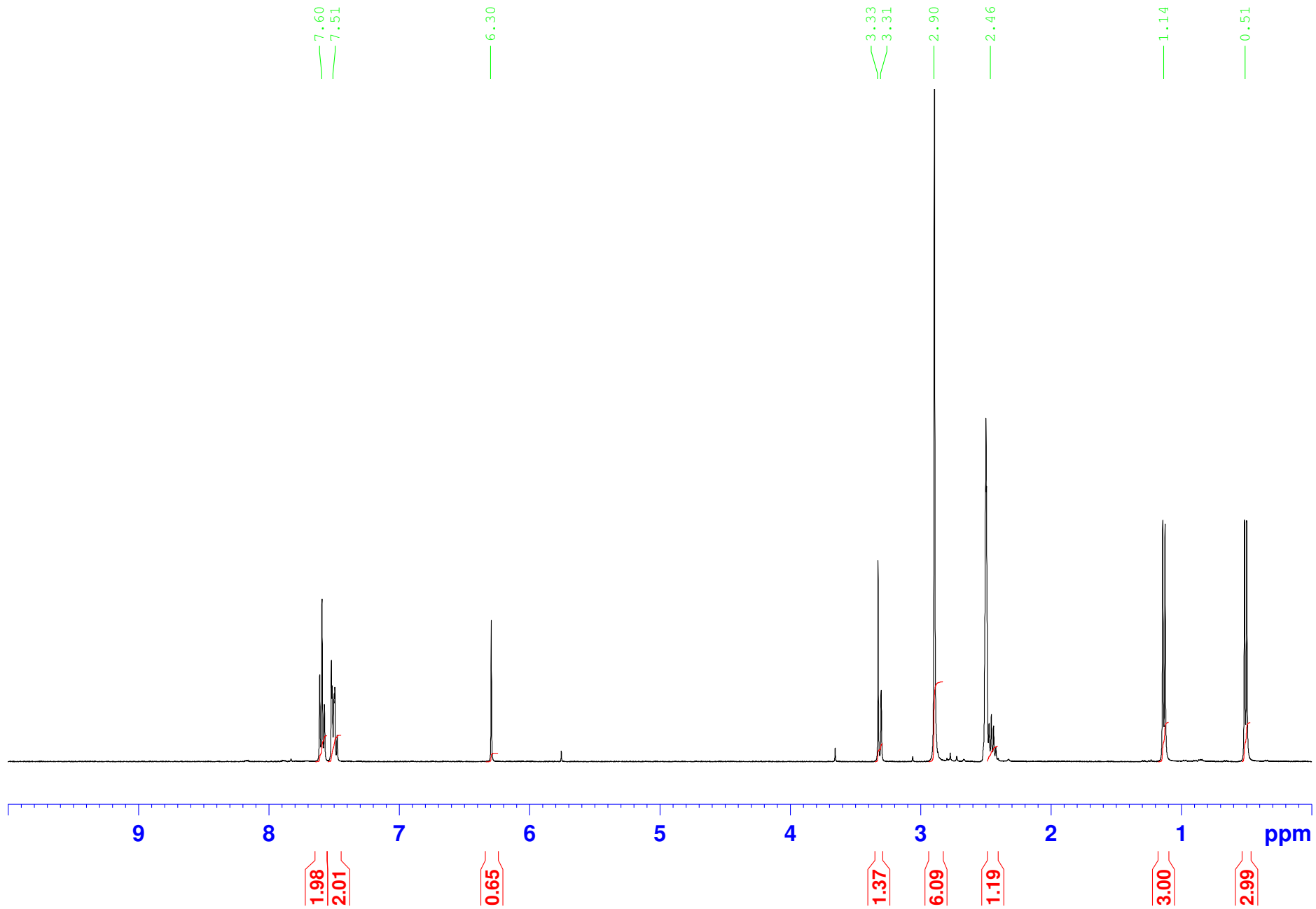
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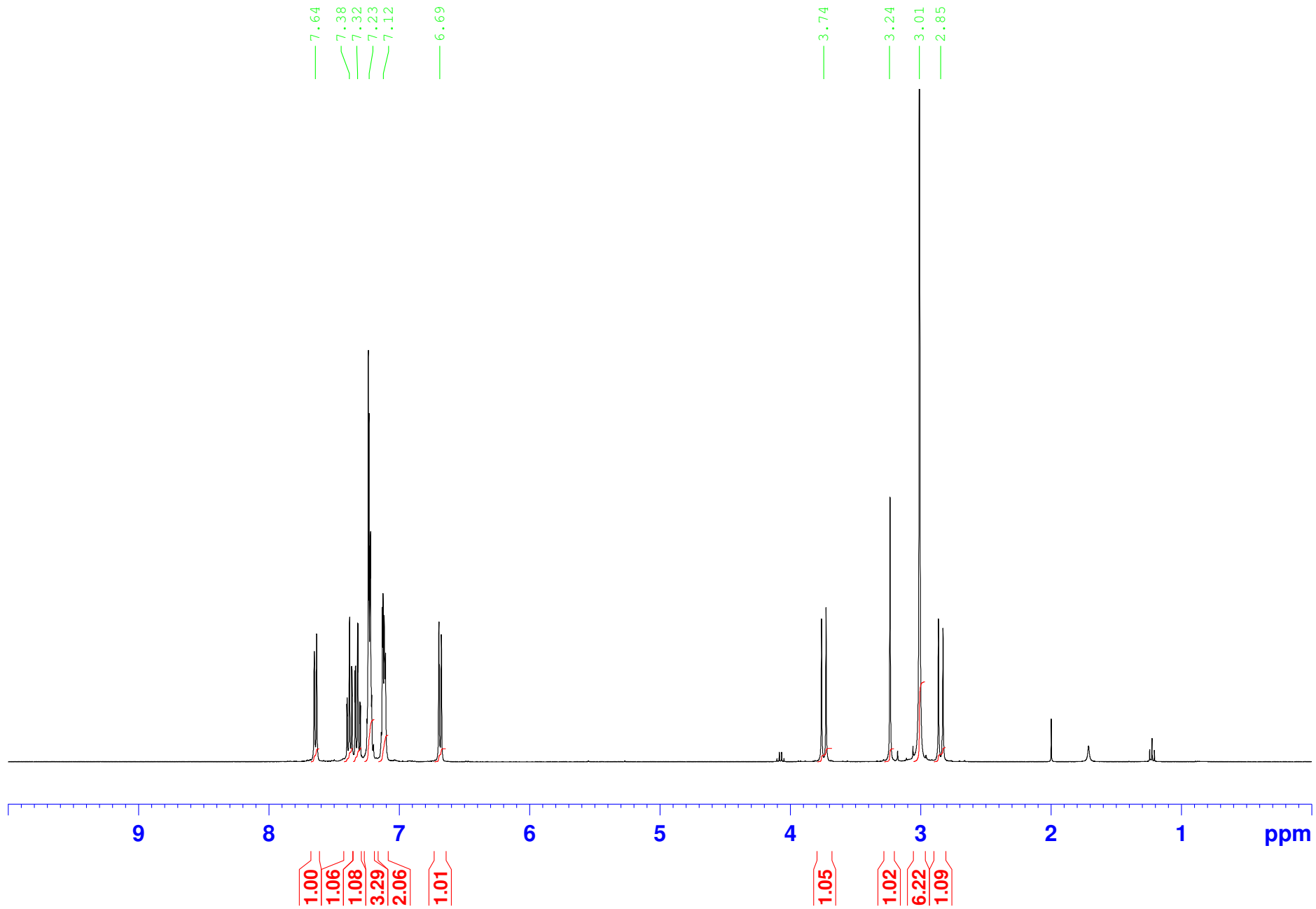
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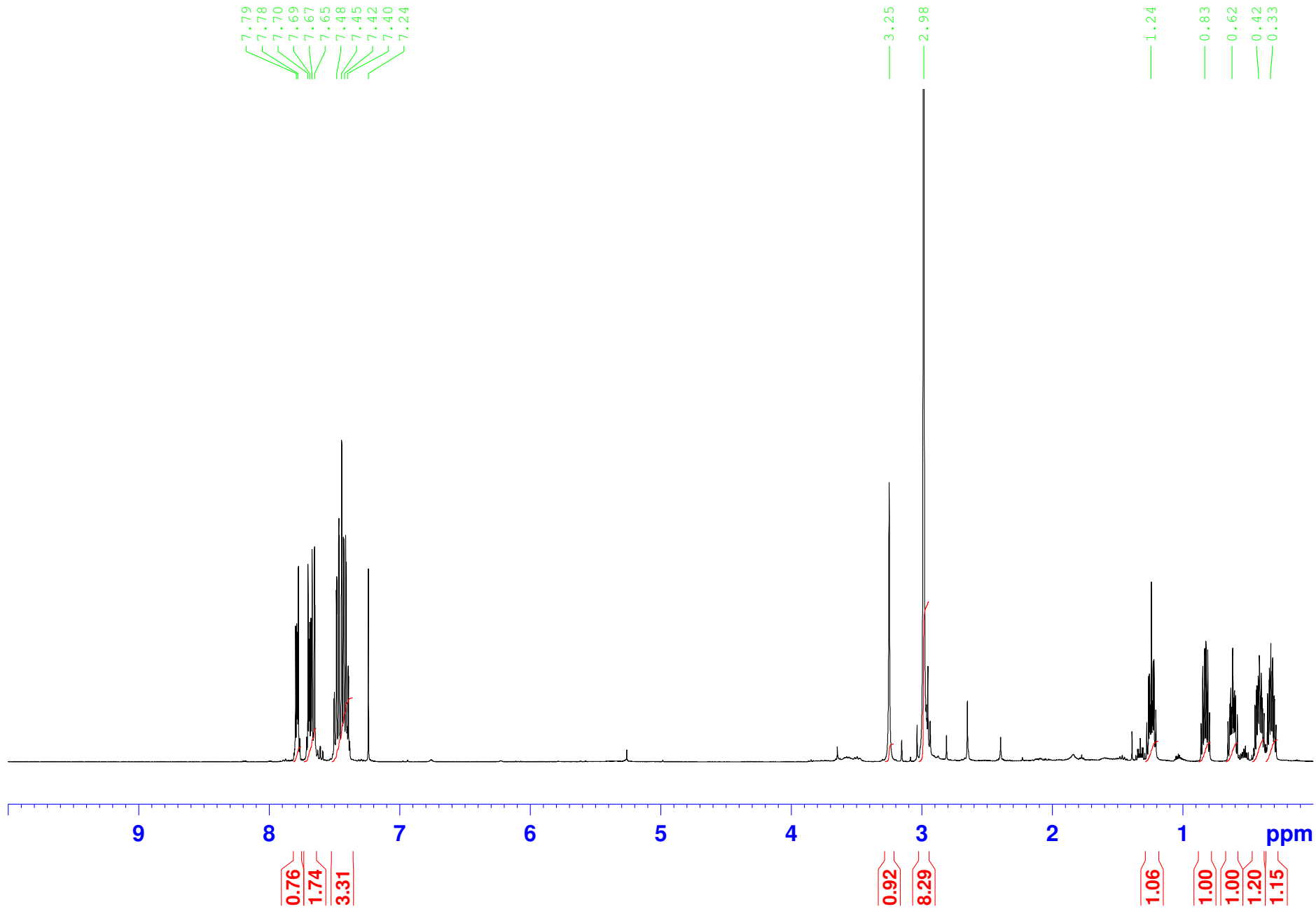
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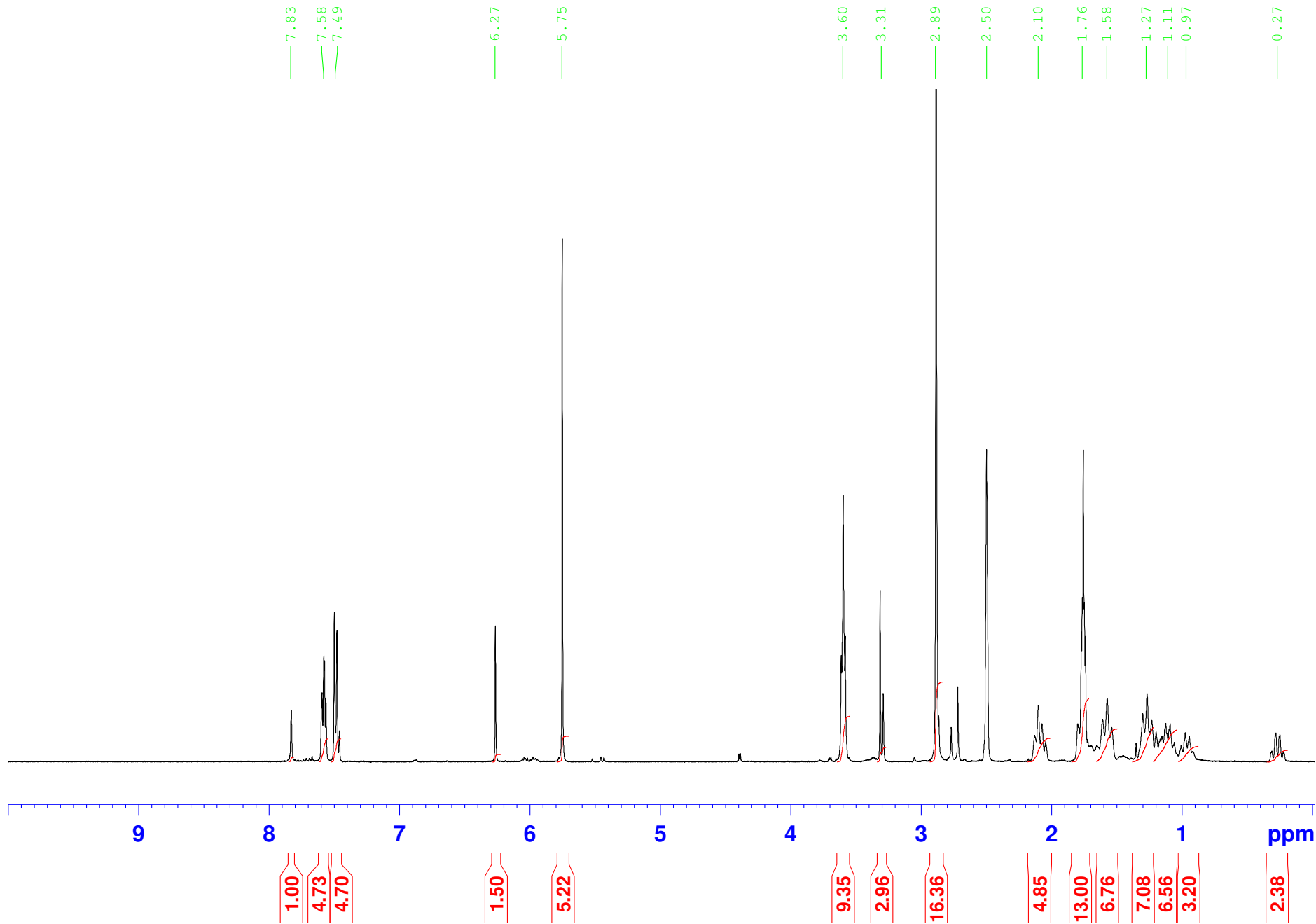
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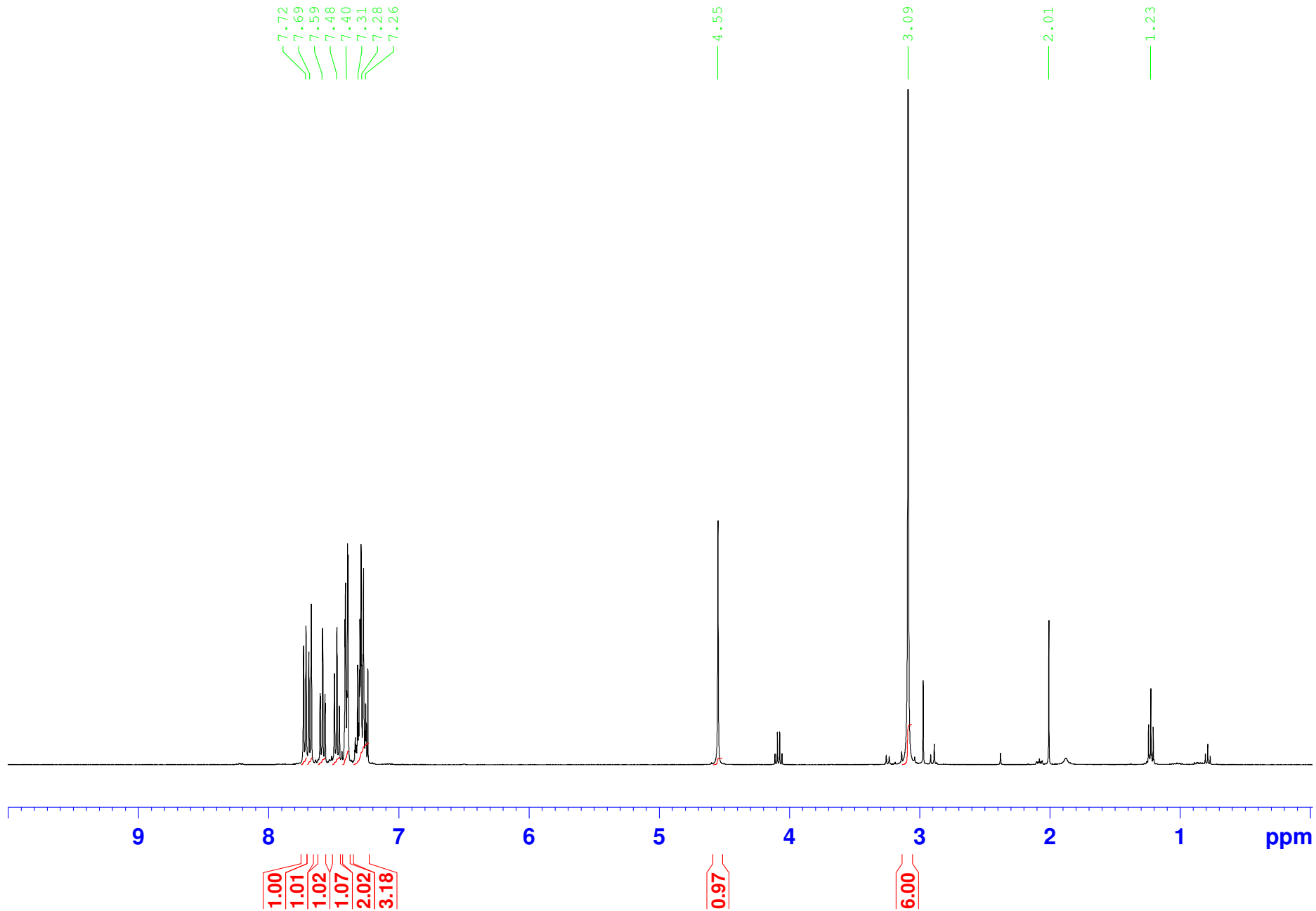
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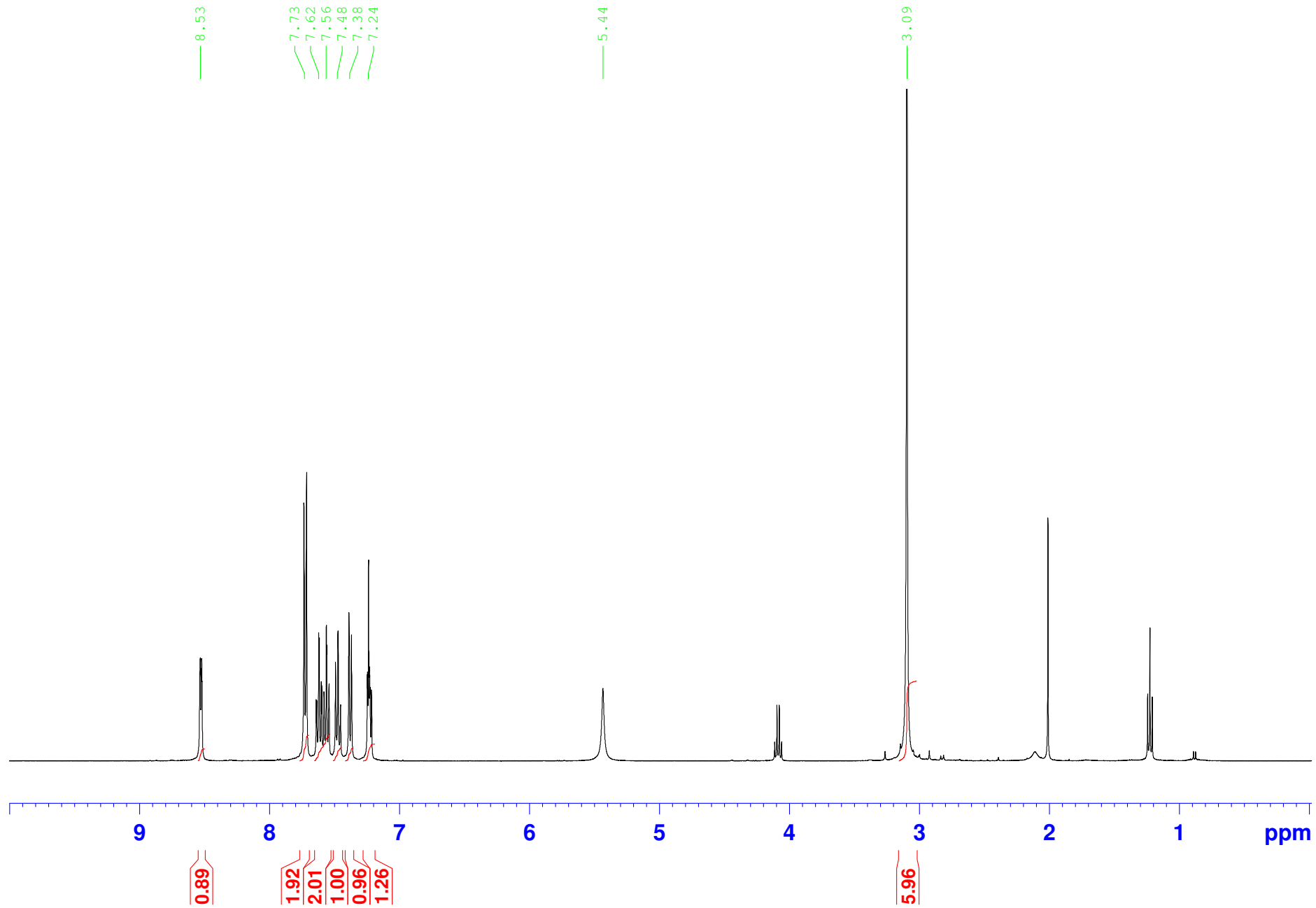
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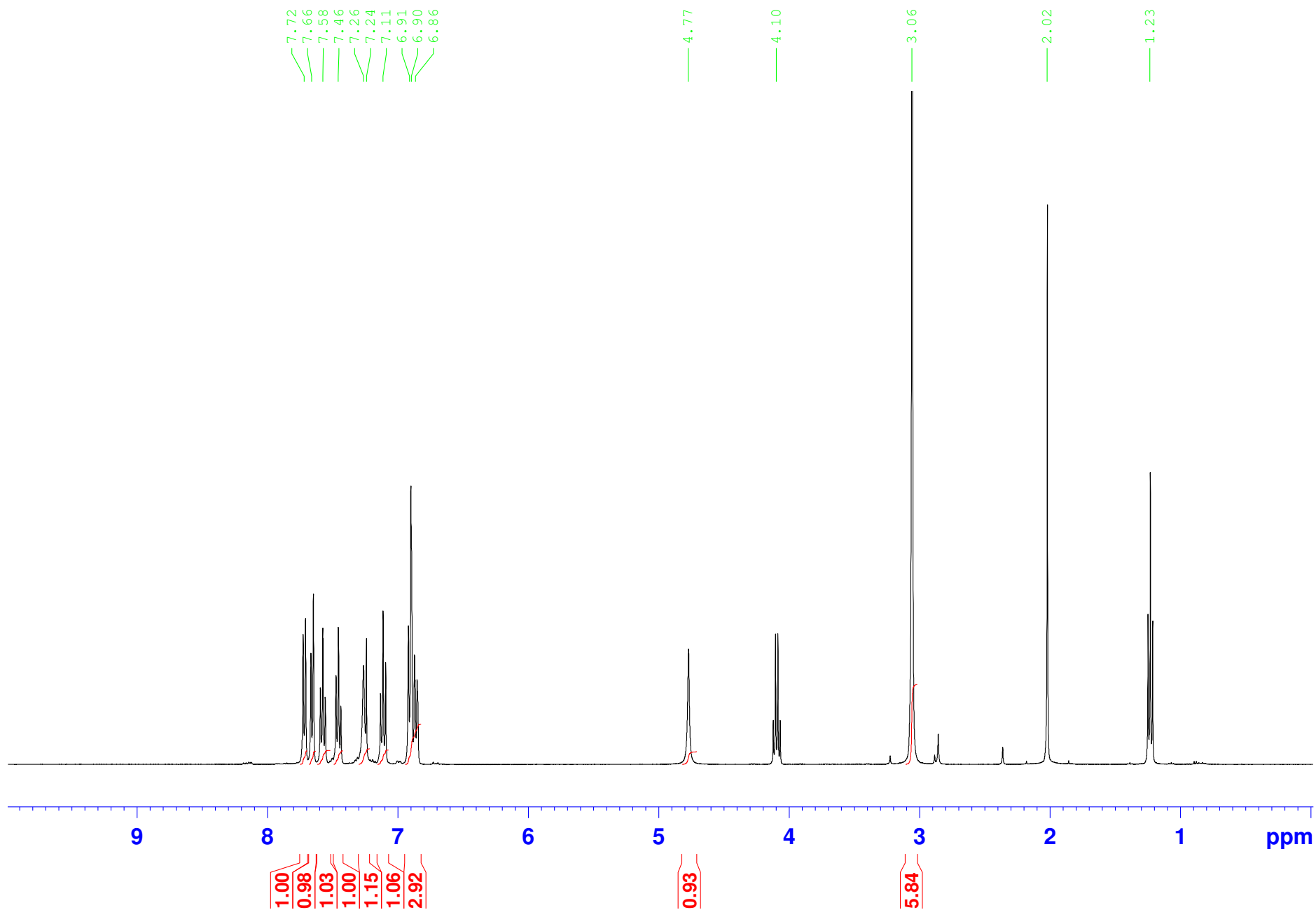
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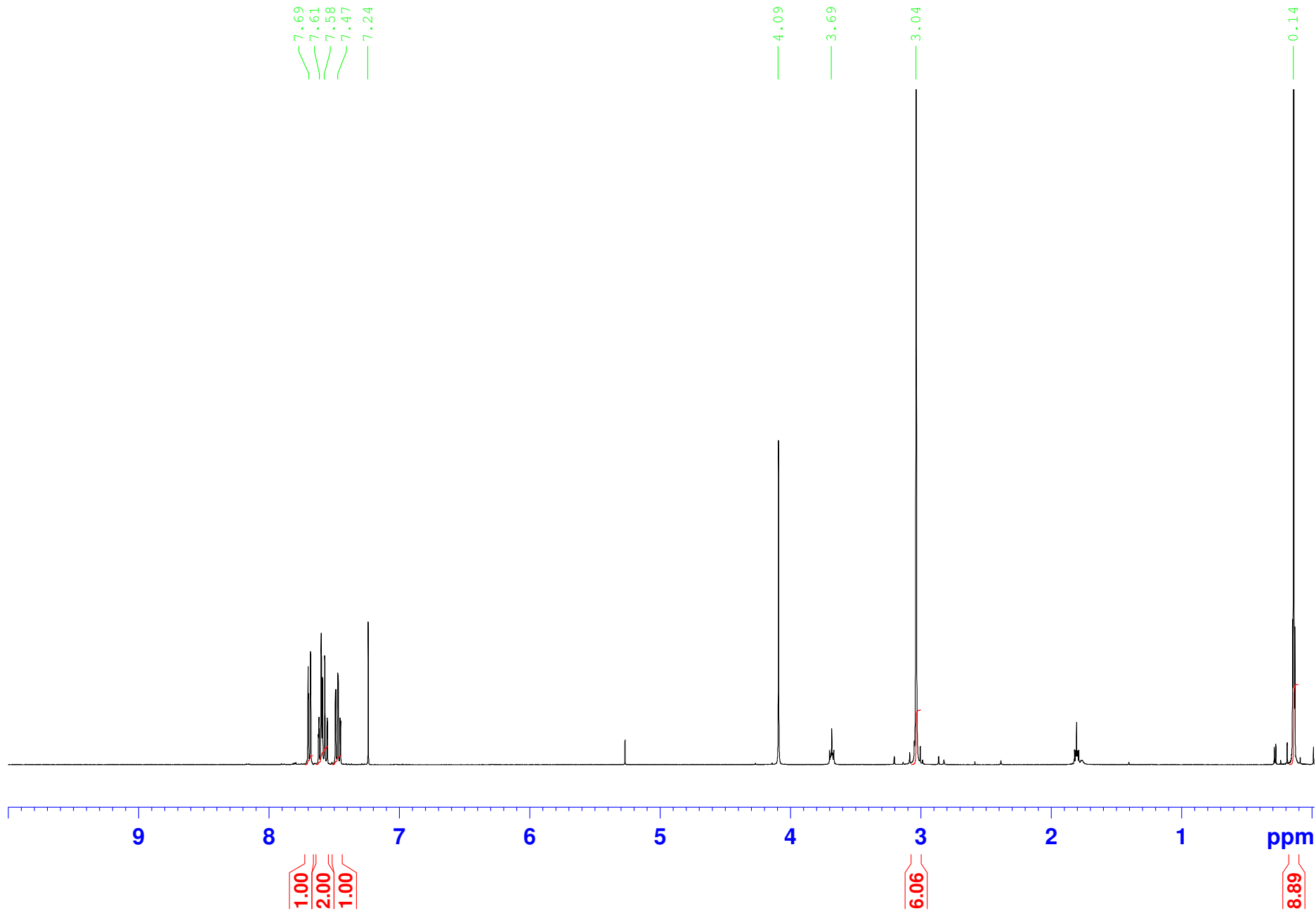
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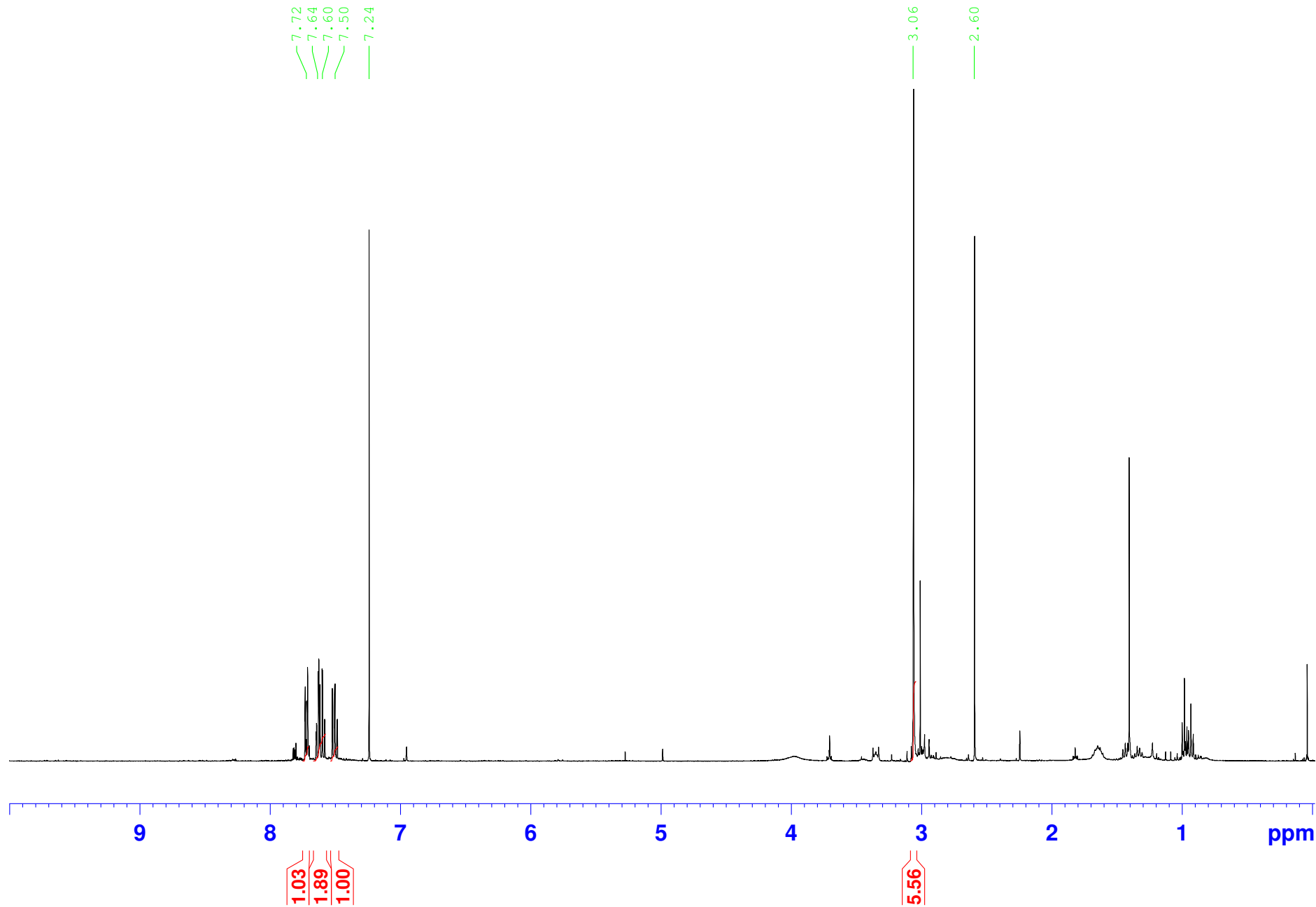
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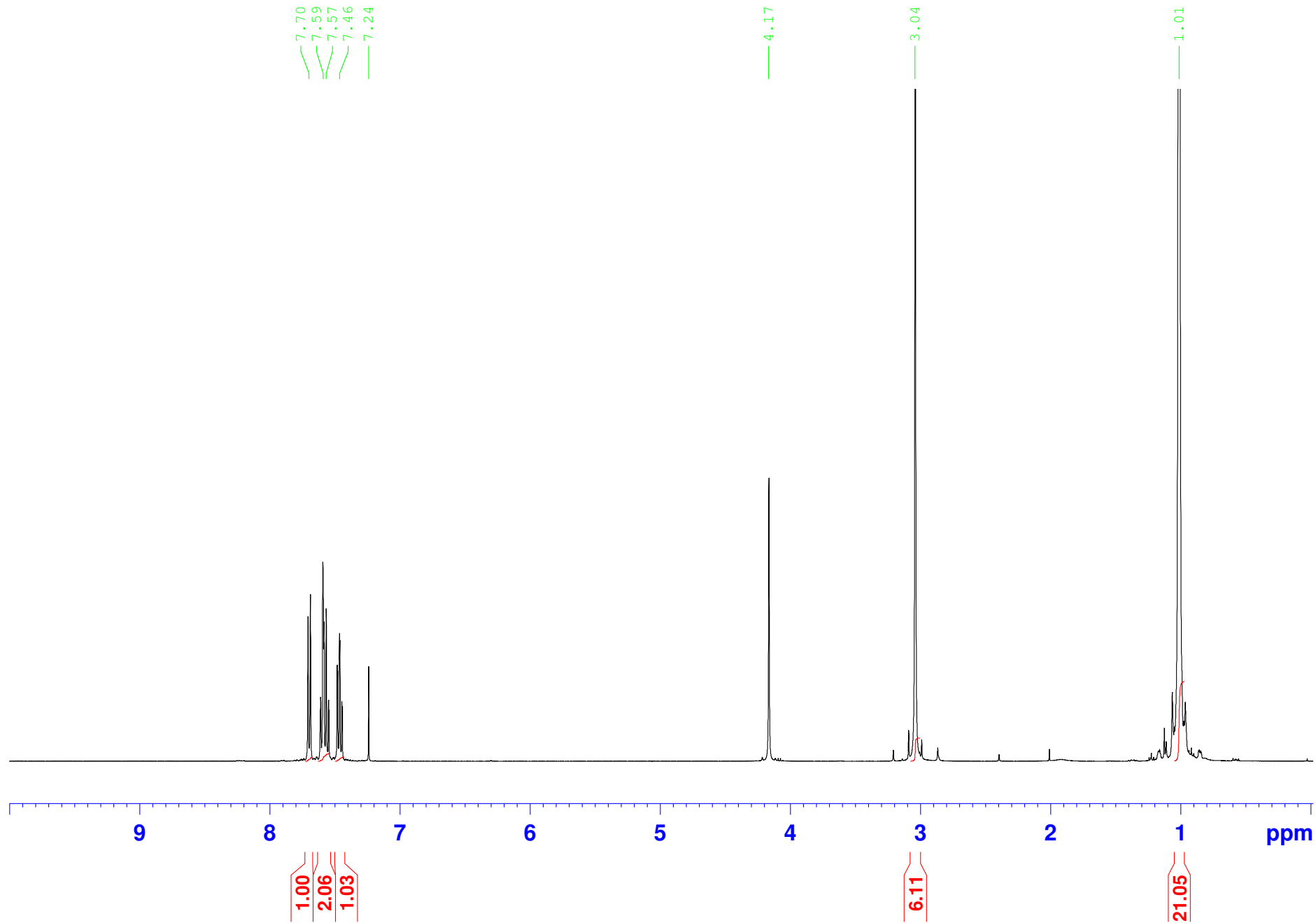
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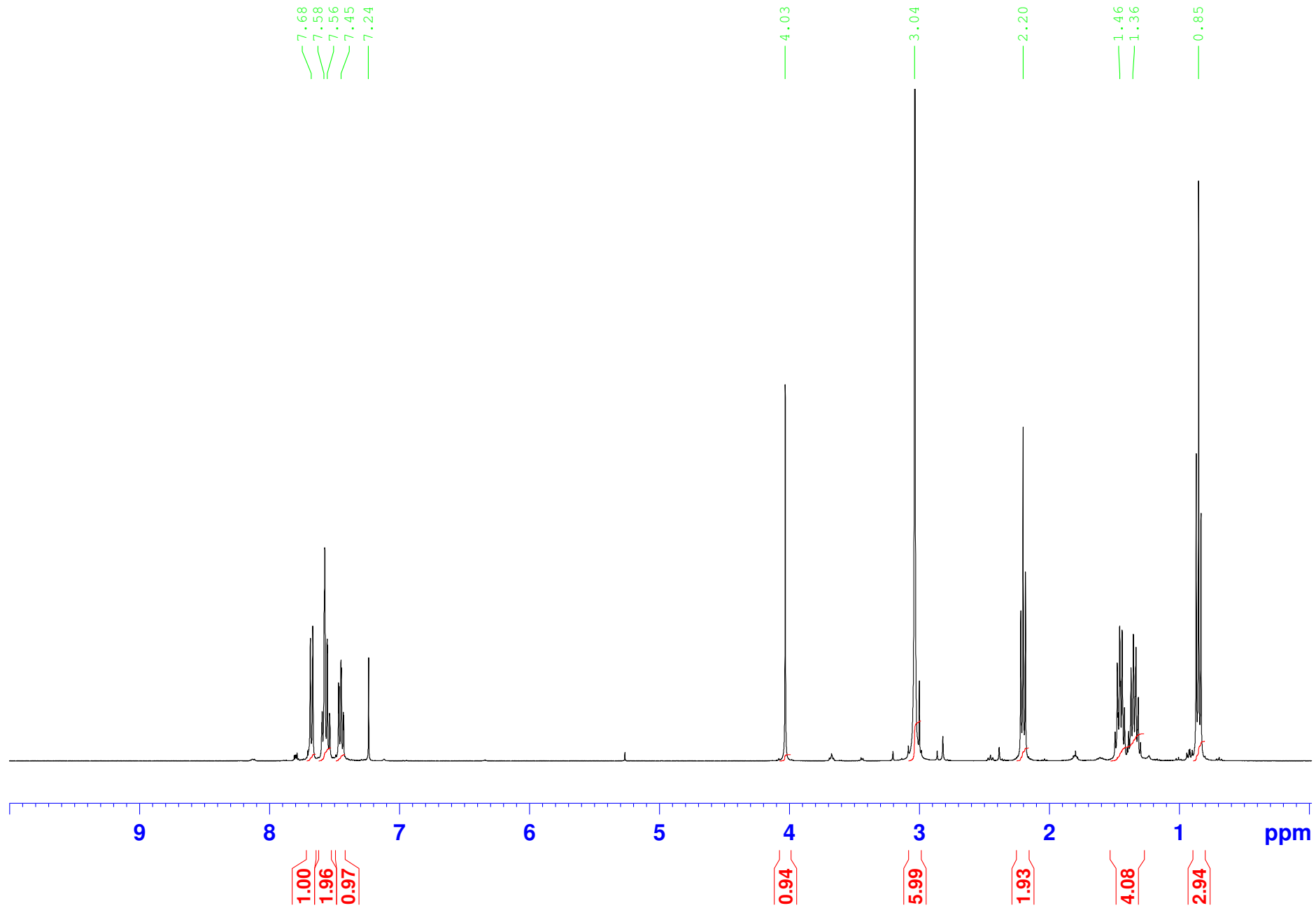
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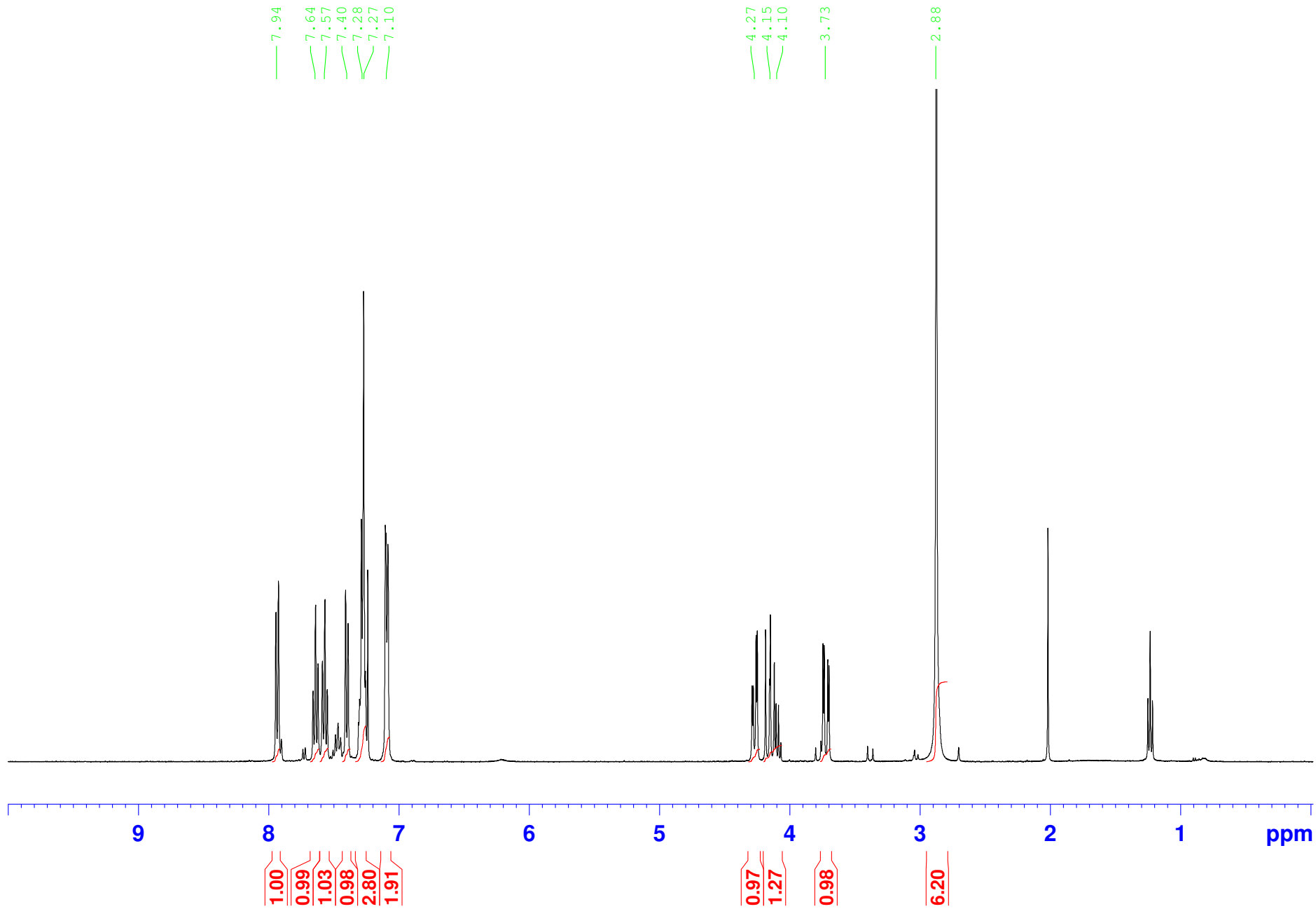
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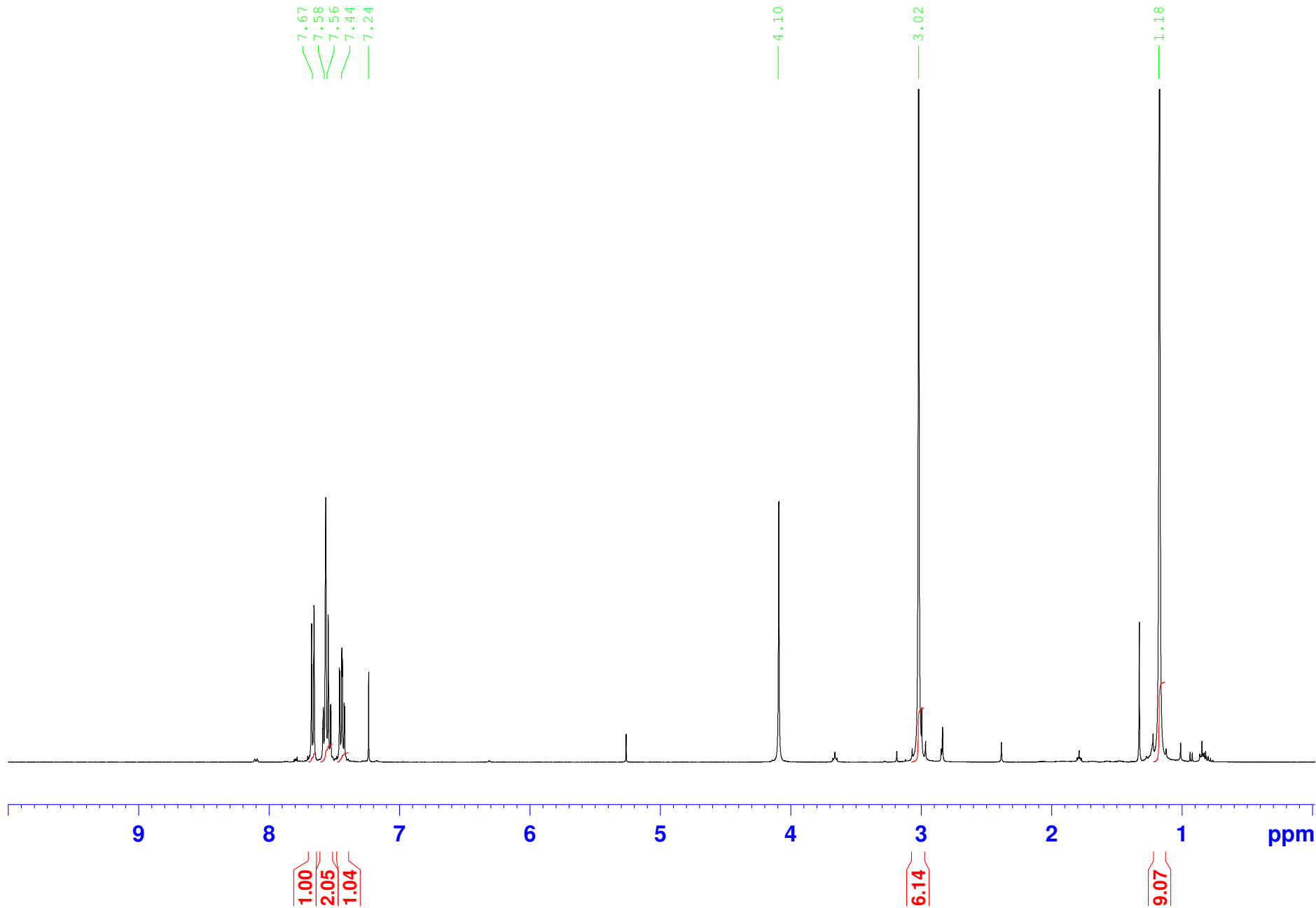
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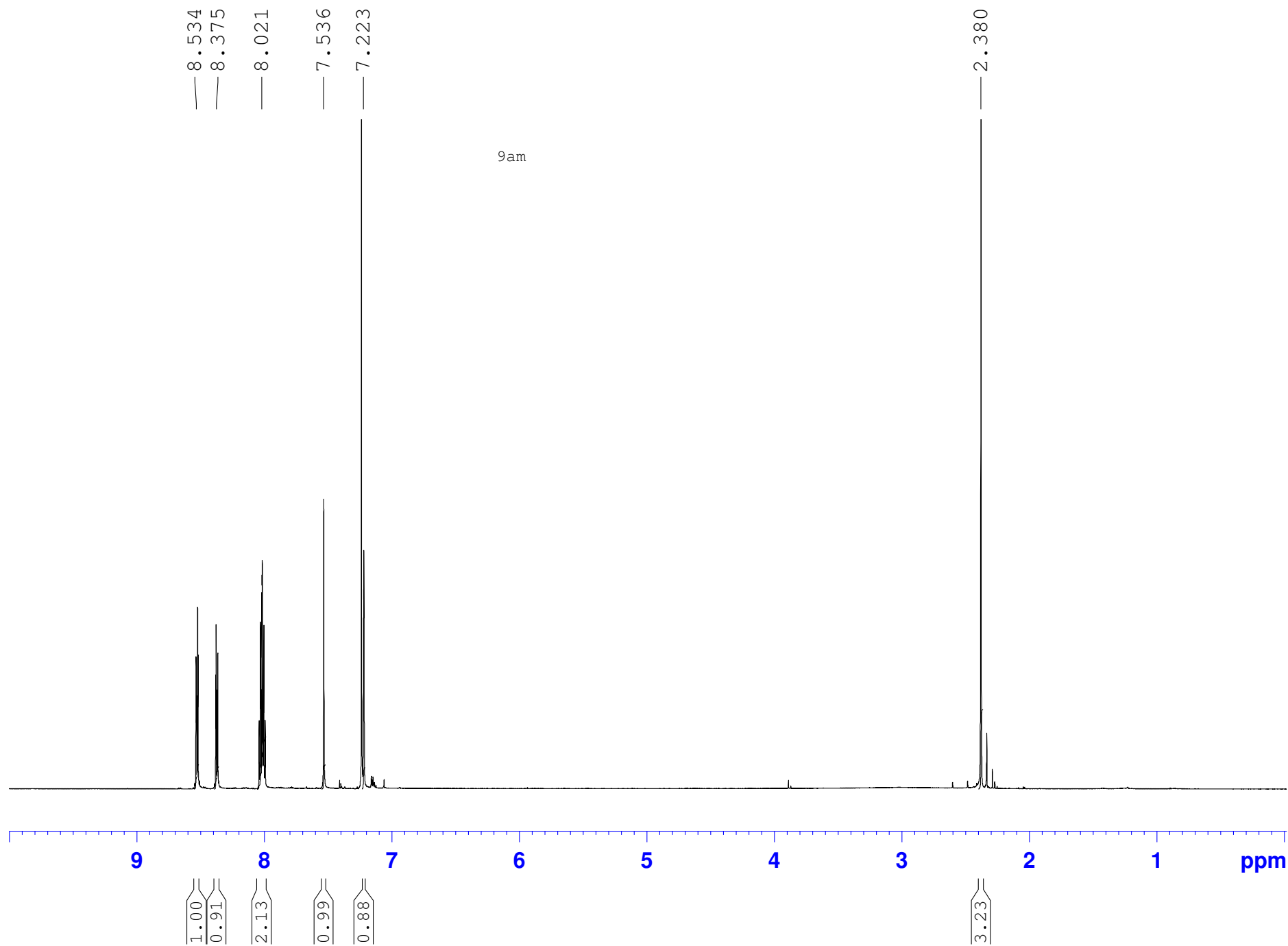


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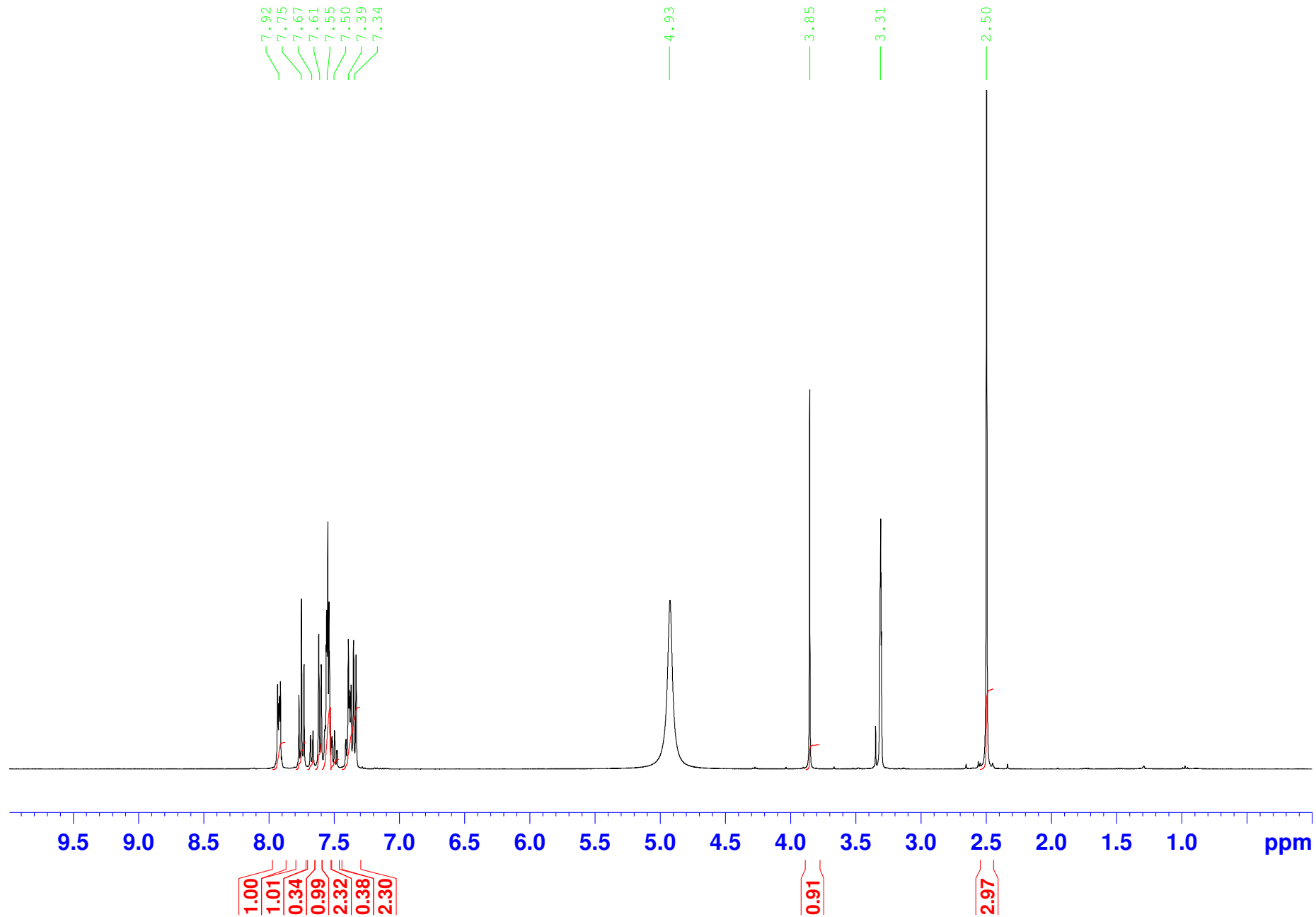


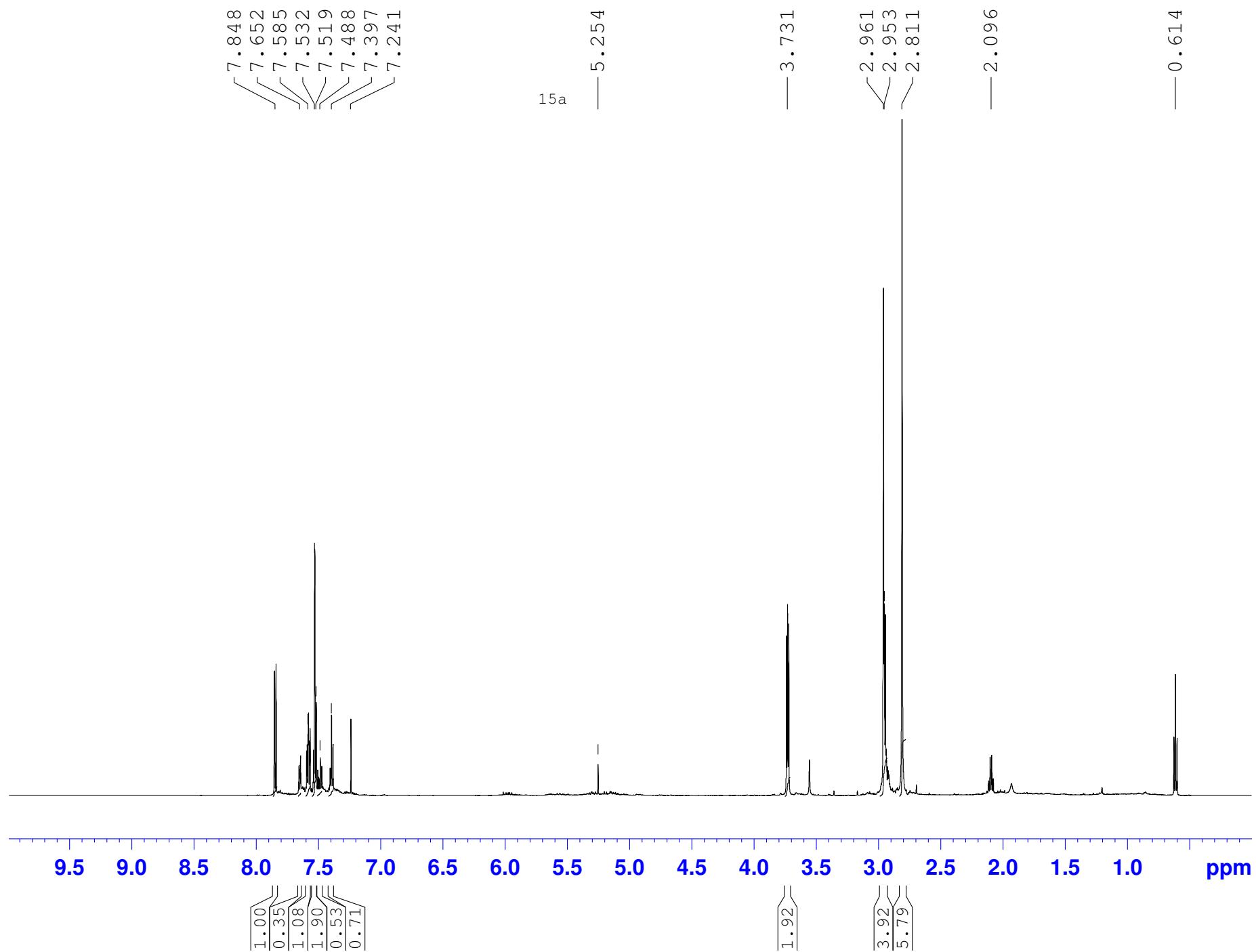
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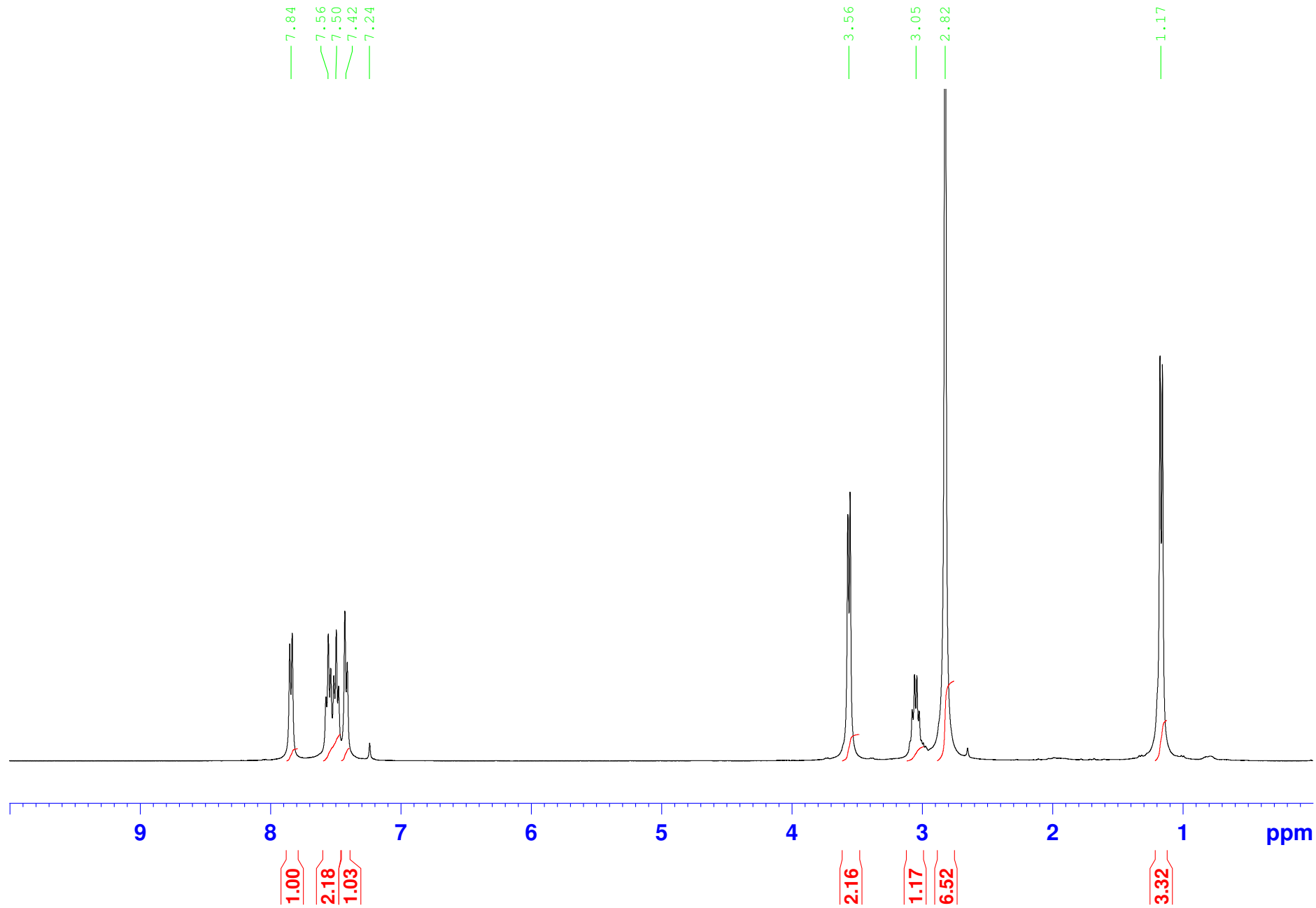


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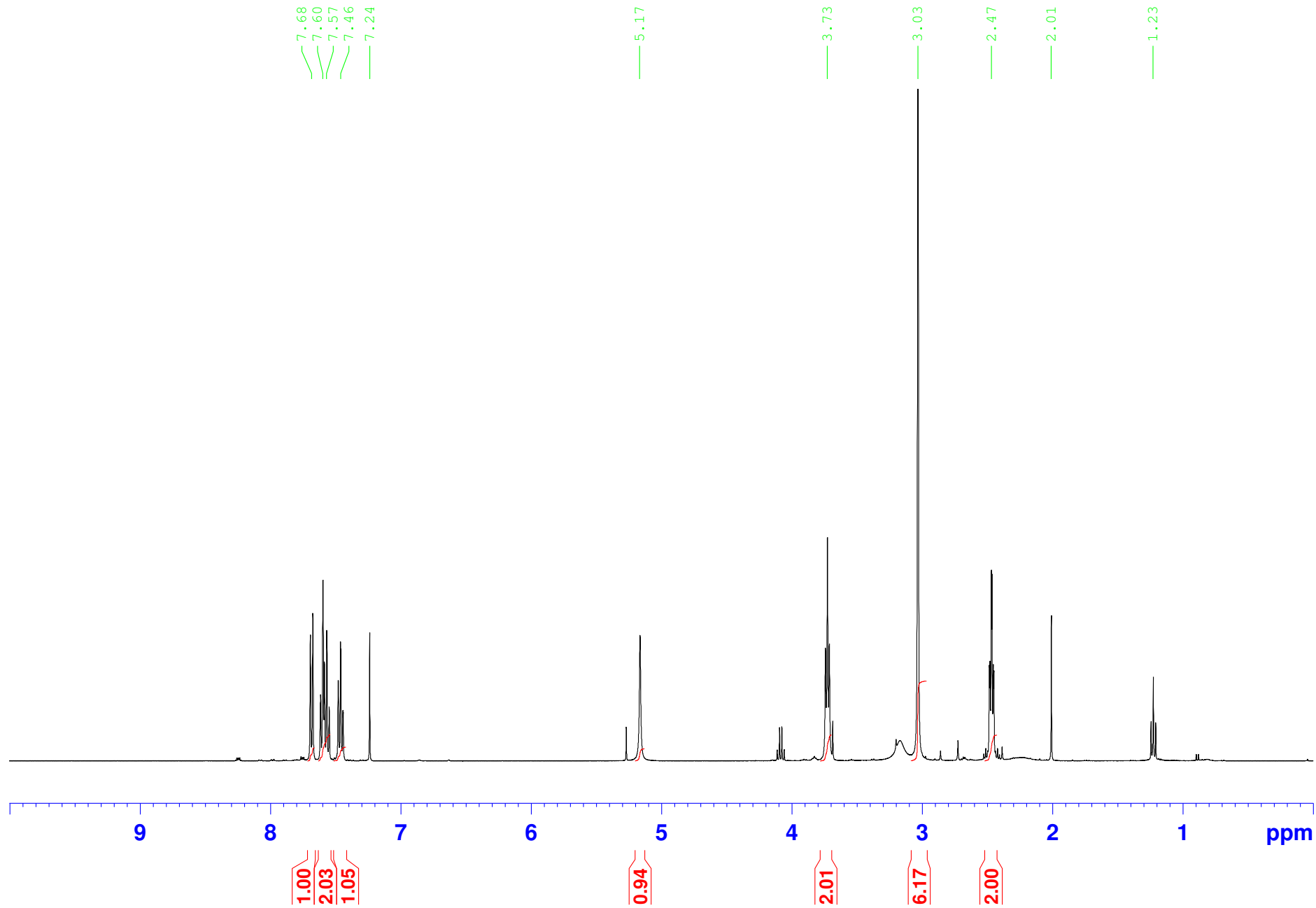




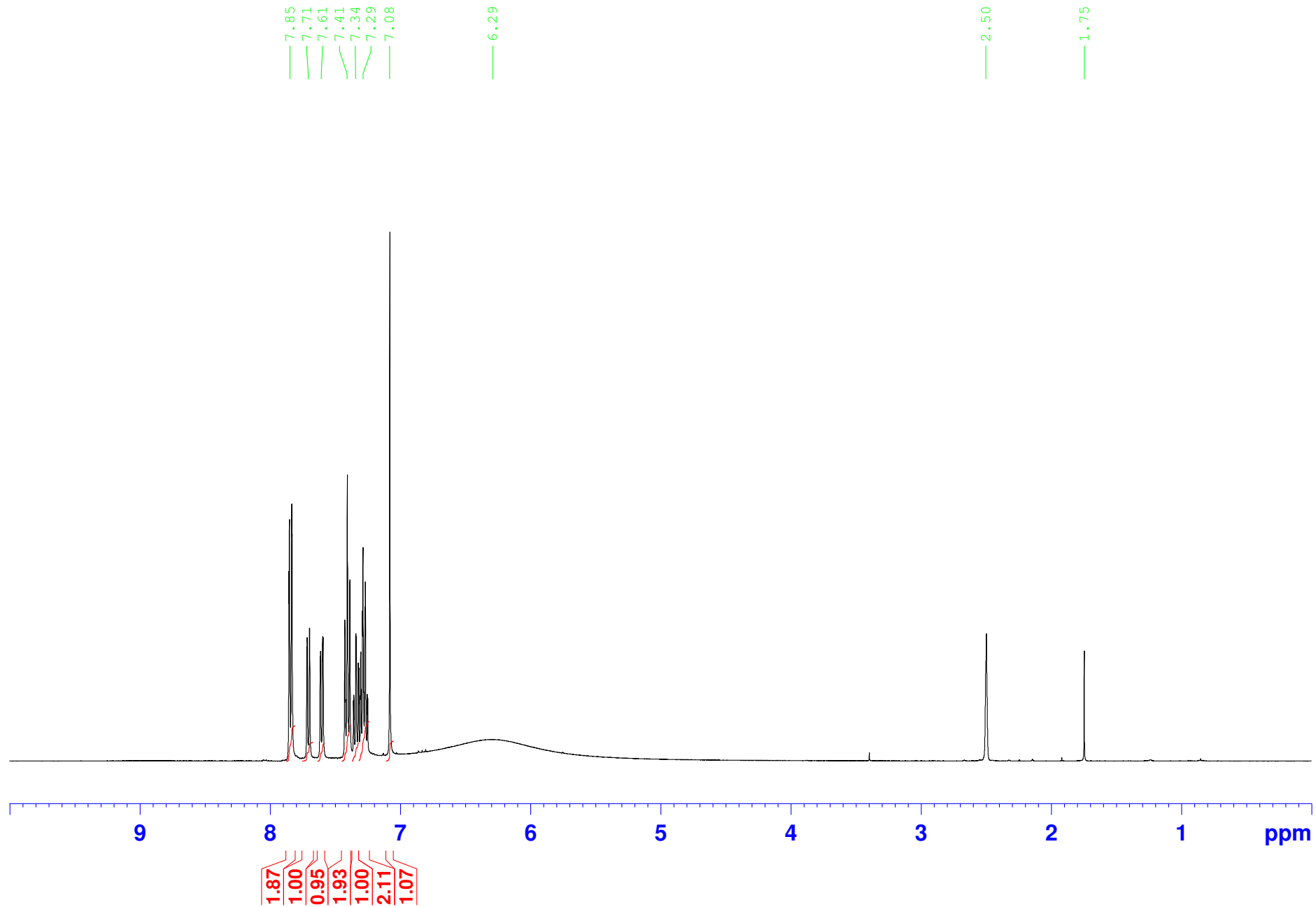
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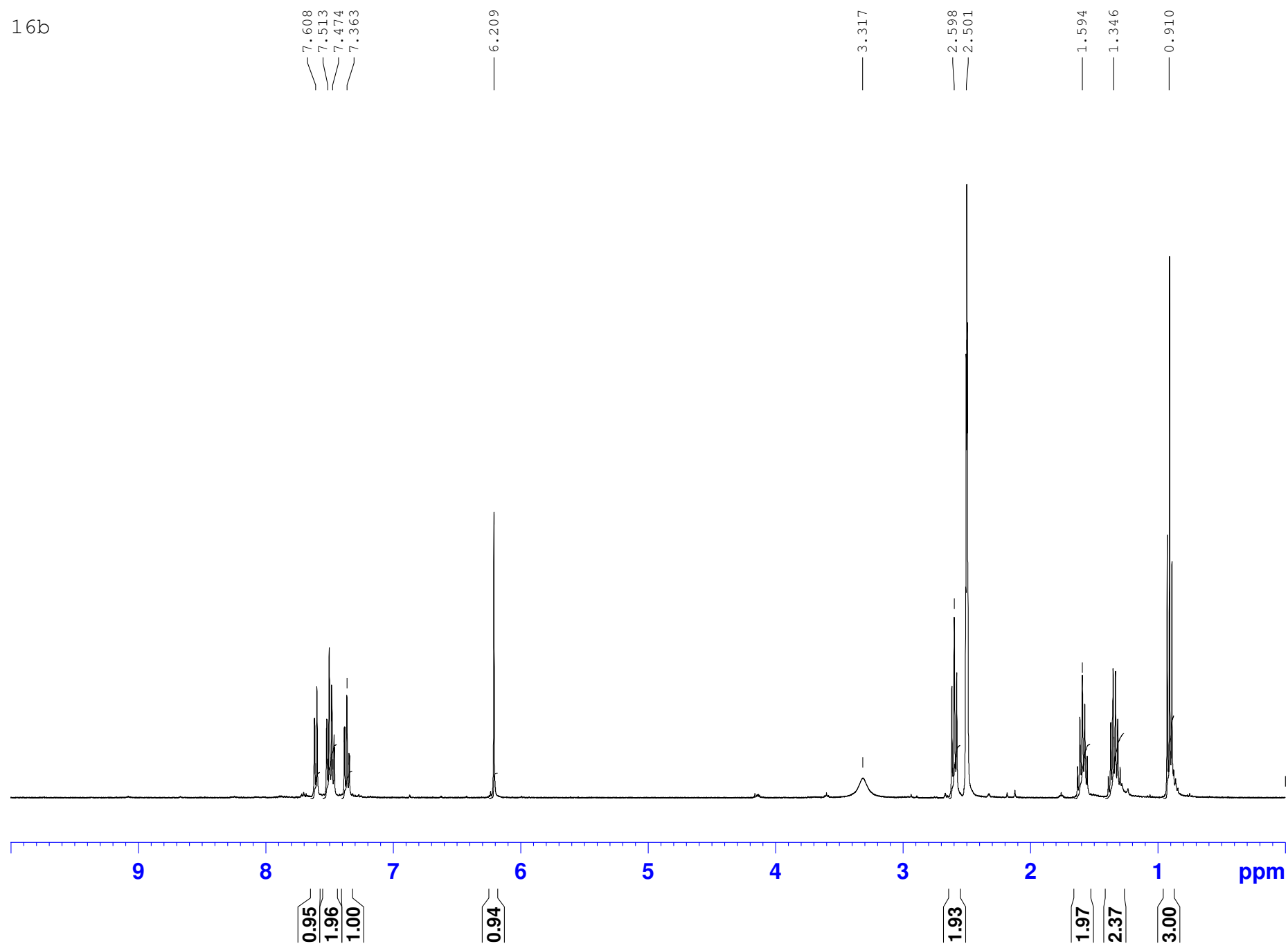
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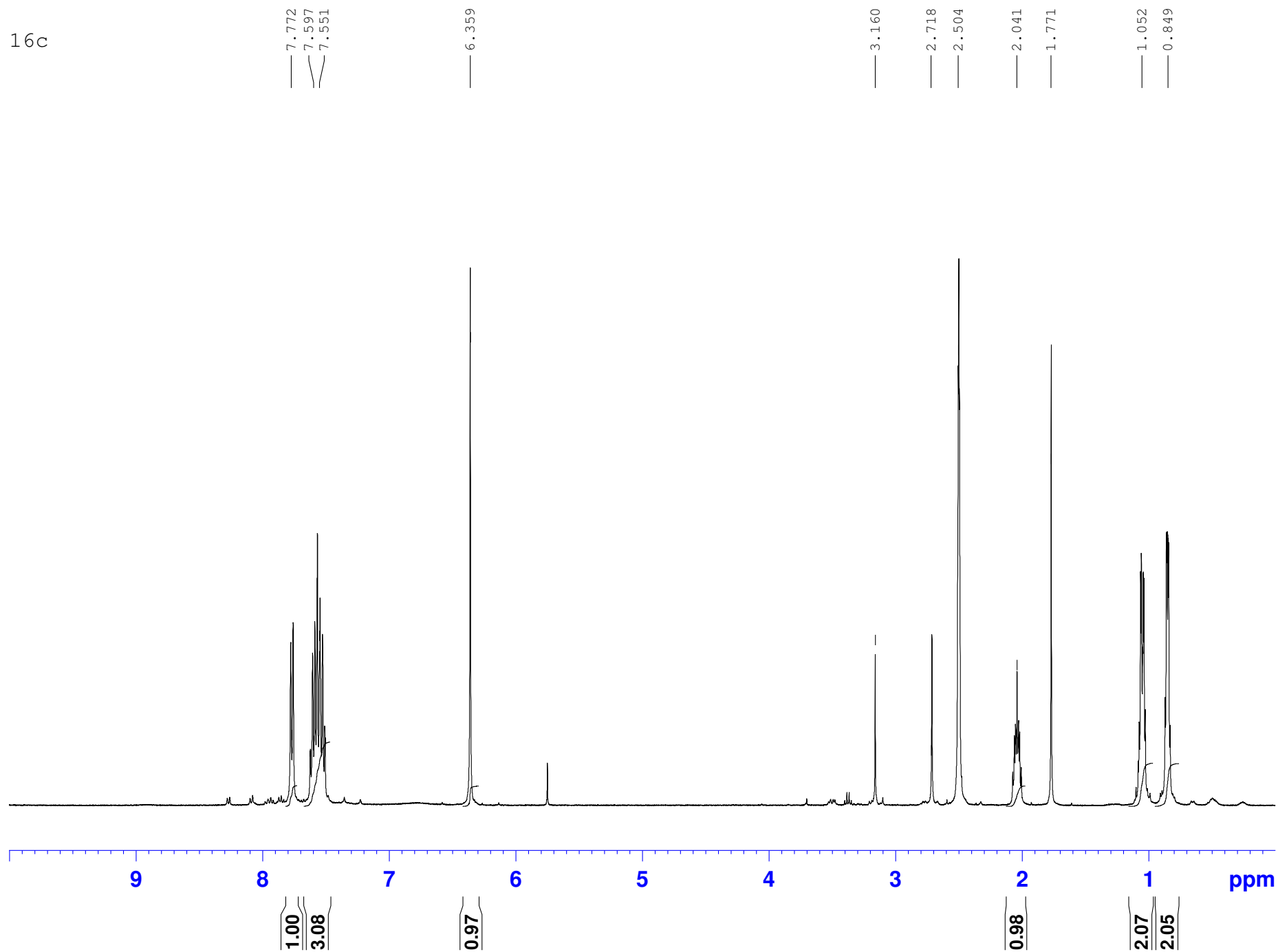
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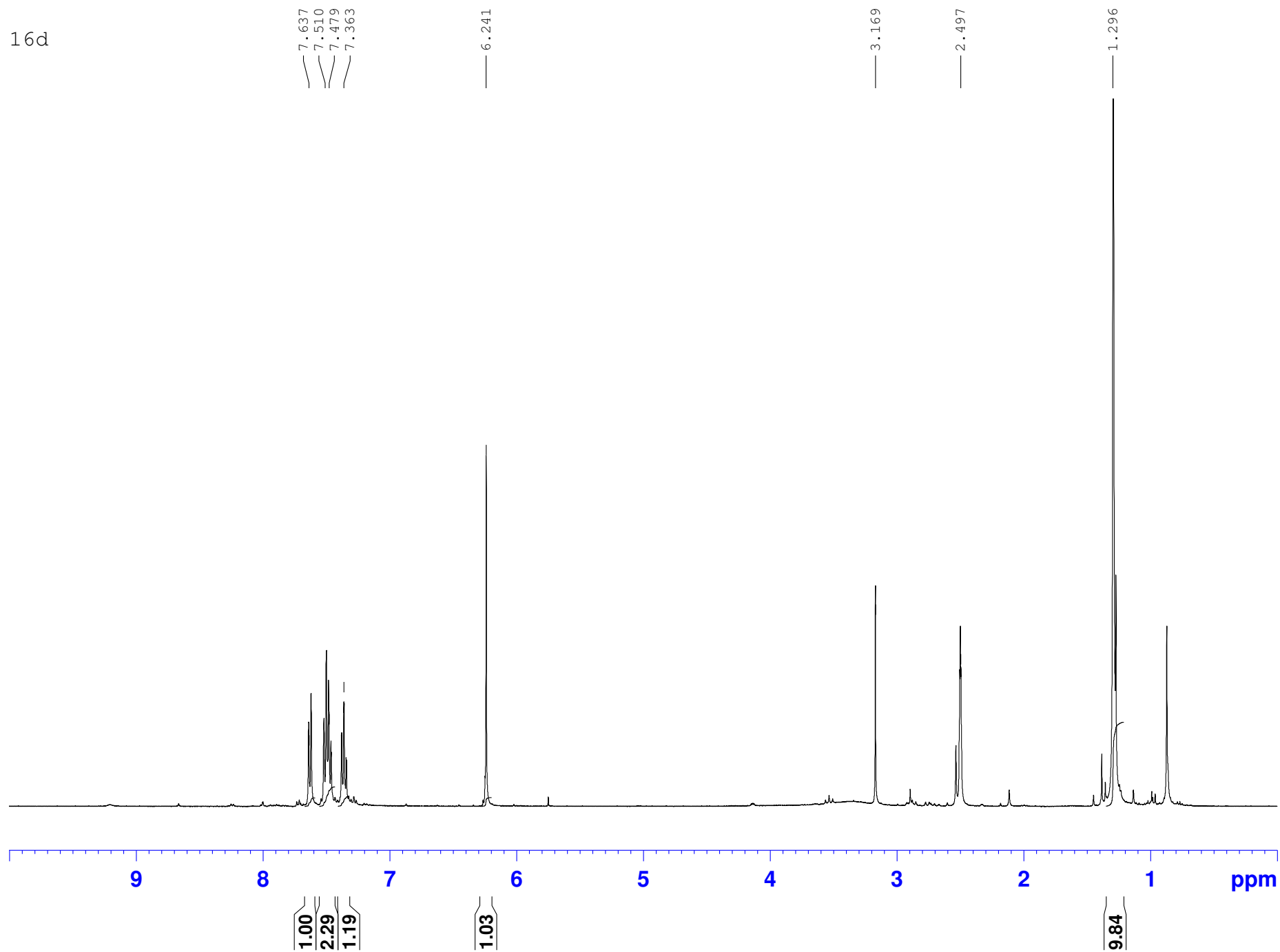
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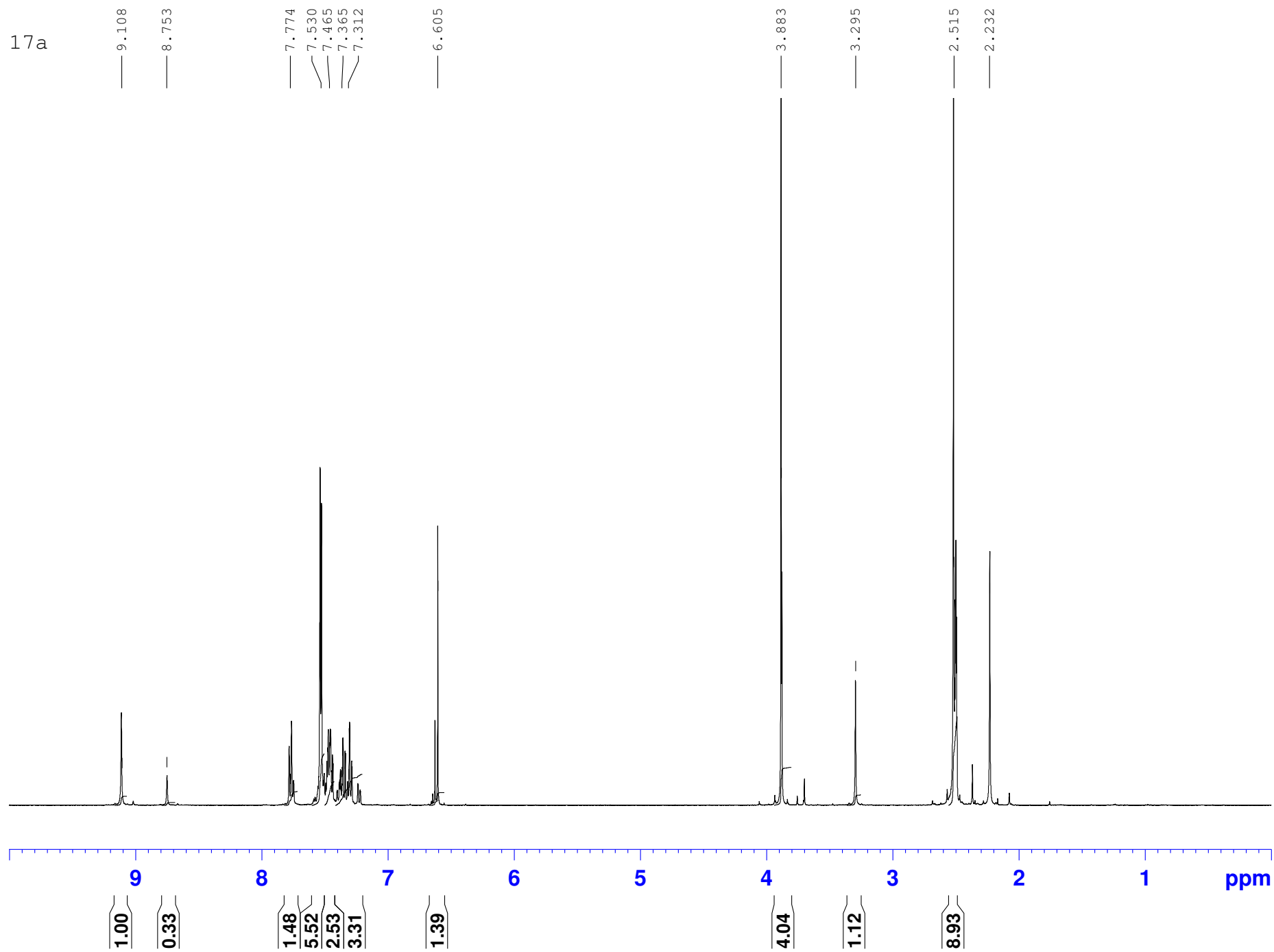


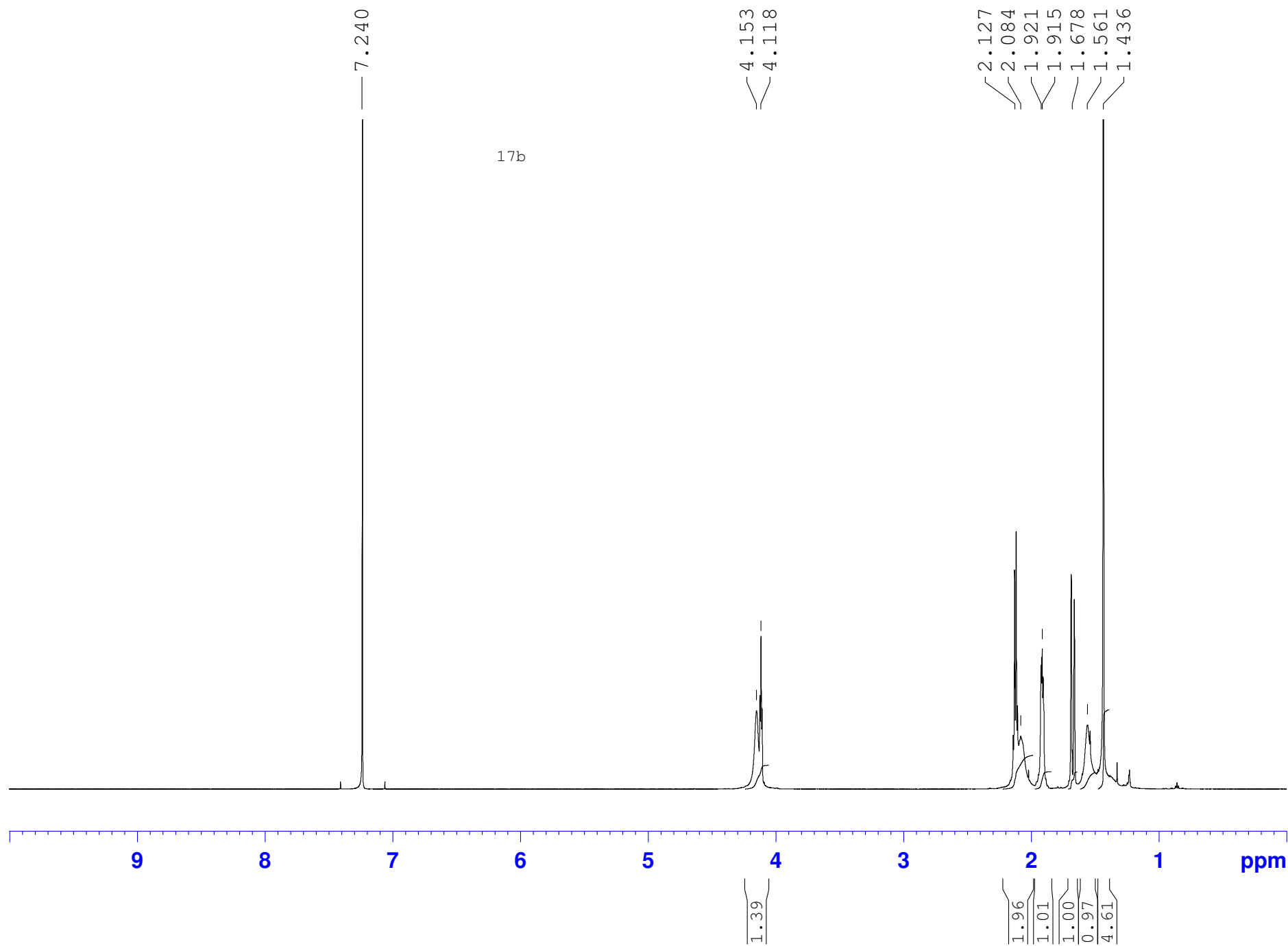
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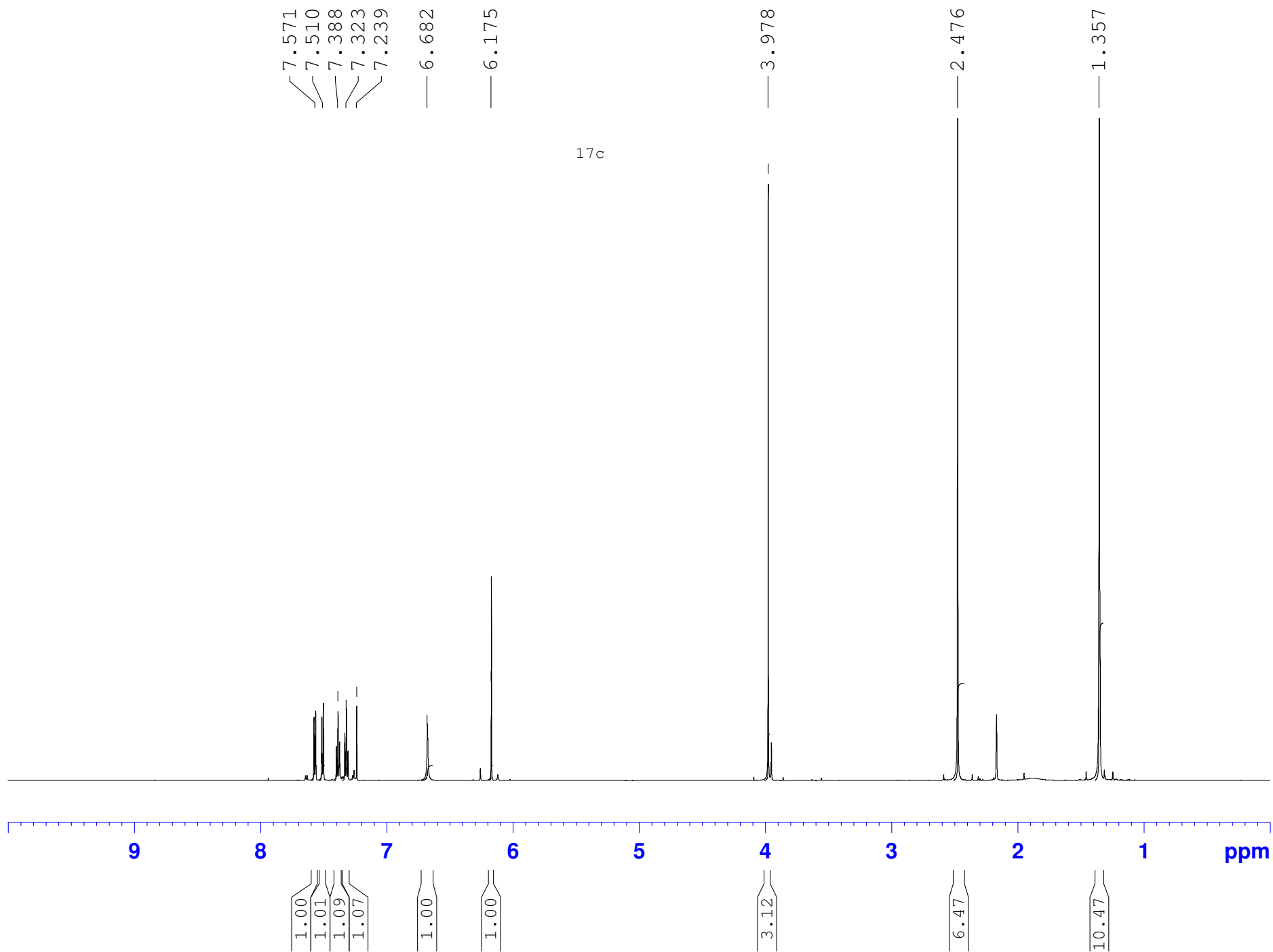


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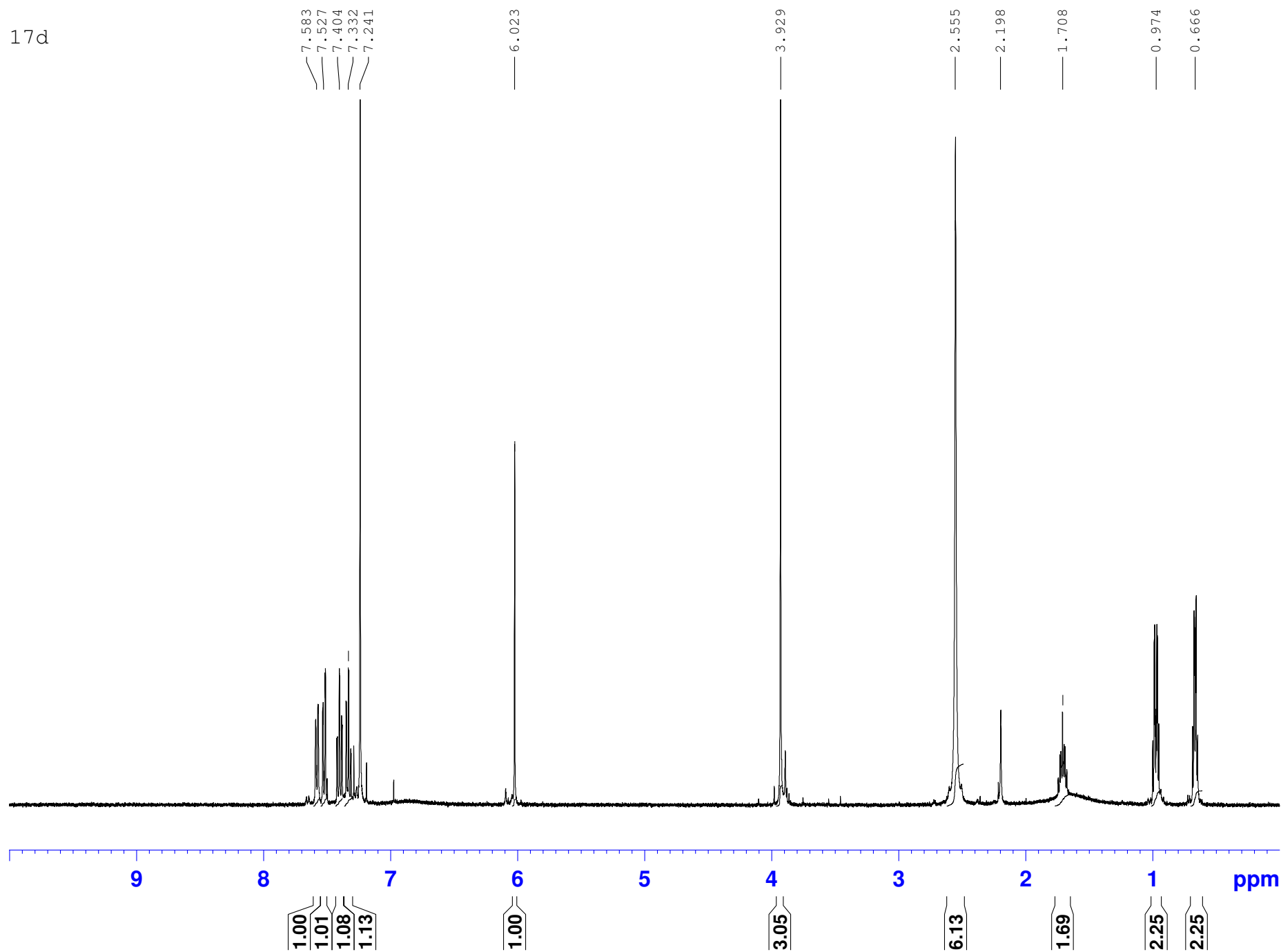


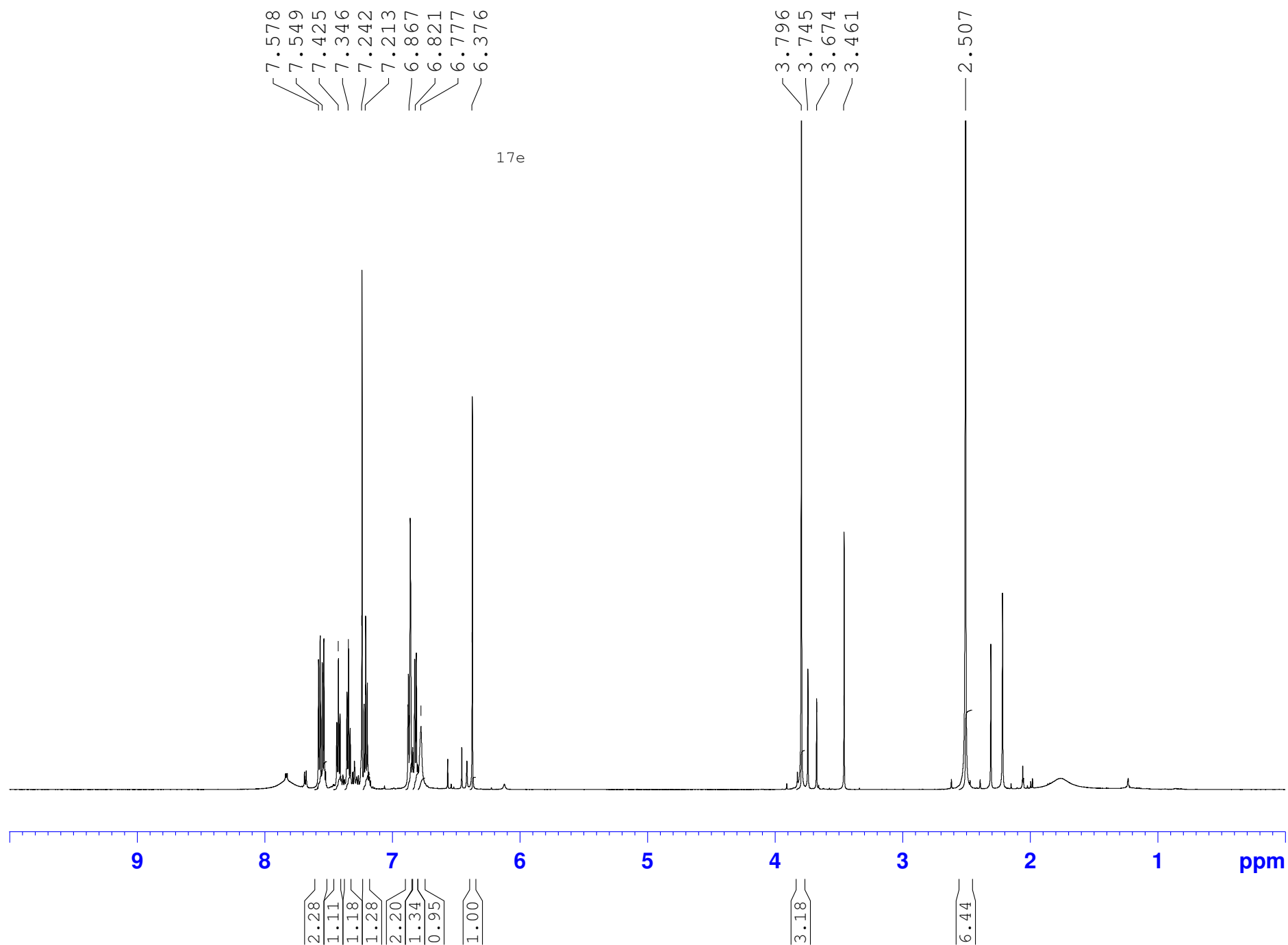




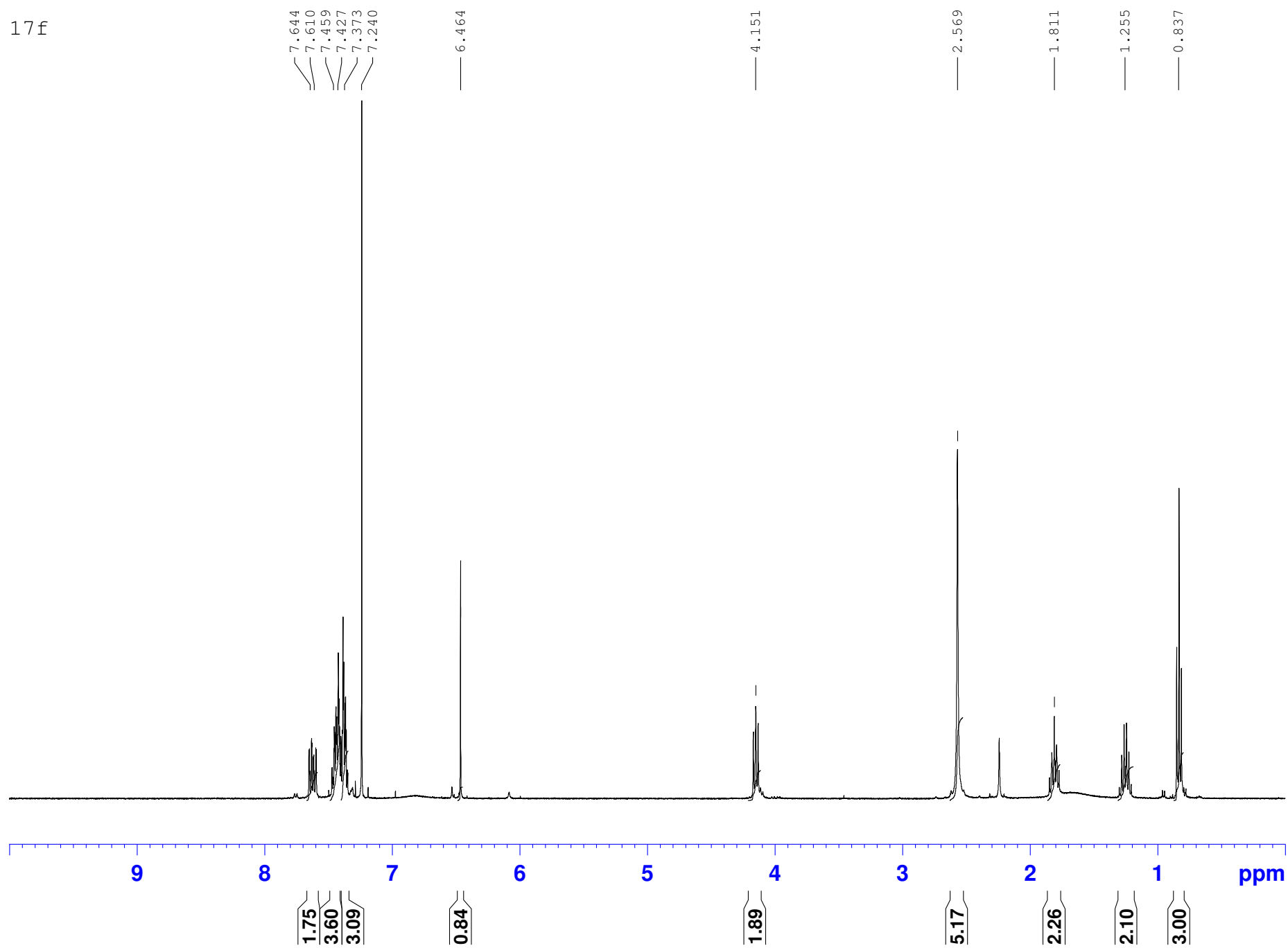


17d





17f



17g

