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## *n*-PARAFFINS OF THE PETALS OF *CALENDULA OFFICINALIS*

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**Abstract**—Eighteen *n*-paraffins ranging from C<sub>18</sub> to C<sub>35</sub> were detected by gas chromatography in the petals of *Calendula officinalis* L.

*Plant.* *Calendula officinalis* L.

*Source.* Cultivated, Hiroshima Prefecture, Japan.

*Uses.* Ornamental and Medicinal.

*Previous Works.* Paraffin (C<sub>32</sub>H<sub>62</sub>) m.p. 71°,<sup>1</sup> hentriacontane,<sup>2</sup> *n*-triacontane.<sup>3</sup>

*Petals.* Et<sub>2</sub>O-*n*-hexane (1:1) extracted at room temperature.

*n-Paraffins.* Eighteen *n*-paraffins (GLC: SE-30 5%, Apiezon L 5%, Molecular Sieve 5A treatment): C<sub>18</sub> 0.1%, C<sub>19</sub> 7.4, C<sub>20</sub> 0.6, C<sub>21</sub> 12.6, C<sub>22</sub> 0.5, C<sub>23</sub> 11.3, C<sub>24</sub> 0.5, C<sub>25</sub> 9.5, C<sub>26</sub> 0.5, C<sub>27</sub> 17.8, C<sub>28</sub> 2.0, C<sub>29</sub> 22.7, C<sub>30</sub> 1.6, C<sub>31</sub> 9.7, C<sub>32</sub> 0.5, C<sub>33</sub> 2.2, C<sub>34</sub> 0.2, C<sub>35</sub> 0.3.

Total amount of *n*-paraffins was estimated to be 0.015% of fresh petals. The ratio of the total amount of the odd members *n*-paraffins to that of even members was 93.5:6.5.

<sup>1</sup> M. SUCHY and V. HEROUT, *Coll. Czech. Chem. Commun.* **26**, 890 (1961).

<sup>2</sup> S. D. MOVCHAN, *Zh. Priklad. Khim* **33**, 484 (1960).

<sup>3</sup> R. STEVENSON, *J. Org. Chem.* **26**, 5228 (1961).