The accompanying figure 1 illustrates what we believe the true structural formulae of the two drugs should be, as taken from Goodman and Gilman (1975) for morphine and from information supplied subsequently by the manufacturers of buprenorphine. We apologize for any embarrassment or inconvenience caused to the editor or publishers of this esteemed journal.

J. W. DOWNING
Durban, South Africa

REFERENCES

ANTI-POLLUTION SYSTEMS
Sir,—The paper by Asbury and Hancox (1977) on the evaluation and improvement of an anti-pollution system makes interesting reading, and it is obvious that the study involved a great deal of work. However, we sought in vain for any measurement of atmospheric pollution which would demonstrate that the system described is effective. This paper is one of many describing a system and suggesting that it is preferable in some way to the many available alternatives.

It is accepted generally that active systems are more effective than passive systems (Armstrong et al., 1977). However, a scavenging system will work only if it is used properly and pollution control will be effective only if all other sources of contamination have been eliminated. Rendell-Baker and Milliken (1977) have pointed out that this applies not only to the anaesthetic machines themselves, but also to pipeline systems which may leak even when the anaesthetic machine is not in use. Thus, the air conditioning system of the theatre must be capable of eliminating pollution emanating from pipeline supplies and leaks from the anaesthetic machine other than the expiratory valve.

May we make a plea for a moratorium on any further publication of methods for dealing with atmospheric pollution in operating theatres, unless measurements have been made which demonstrate that the system described is effective during long-term clinical use.

LEO STRUNIN
I. M. CORALL
London

REFERENCES


CALCULATION OF OXYGEN CONCENTRATION IN AIR
Sir,—In their article on the Quantiflex air-oxygen mixer, Richardson, Chinn and Nunn (1976) described a graph and calculator for estimating the concentration of oxygen in an air-oxygen mixture. A letter from Lack (1977) described an alternative nomogram for the same purpose.

The use of a simple nomogram requires a straight-edge or ruler. To avoid this requirement I have prepared a simple ready-reckoner (Table I) which has been in use for some time and has been found acceptable in practice. The calculation in the “box” opposite the air flow is read on the x-axis and the oxygen flow on the y-axis. The calculations are to the nearest 1% which is adequate for clinical purposes. Increments of air and oxygen are given as whole litre min⁻¹, but the chart could easily be expanded to accommodate fractions of litre min⁻¹. For adult patients, however, simple interpolation provides an adequate estimation.

### Table I. Percentage oxygen concentrations in air-oxygen mixtures

<table>
<thead>
<tr>
<th>Air flow (l/min)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen flow (l/min)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
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<td>10</td>
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<td>57</td>
<td>65</td>
<td>73</td>
<td>81</td>
<td>89</td>
<td>97</td>
</tr>
</tbody>
</table>

It is easiest to use this ready-reckoner when there are separate air and oxygen flowmeters, supplying ventilators such as the Barnet or the Brompton Manley. When using ventilators which entrain air, such as the Cape, the air flow must be determined by subtracting the added oxygen flow from the minute volume.

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REFERENCES