

There seems to exist common agreement that the most dangerous super-toxic lethal chemicals can be defined as chemical with  $ld_{50}=0.5$  mg/kg (subcutaneous) or 2,000 mg-min/m<sup>3</sup> (by inhalation). Since the compounds in this class have not proven to have any non-hostile use - outside the small amounts permitted for research and protection purposes - they can be totally prohibited and verified as chemical agents on the basis of the toxicity properties alone. Thus, if the toxicity of a chemical can be measured by an agreed method and it exceeds a given limit, it will be declared a prohibited agent.

In reality the determination of the toxicity may be difficult and time consuming, since known amounts of pure compounds are needed for reliable animal tests. It could be easier to identify the chemical structure of the compound in question if a certain state of readiness exists. Therefore a list of prohibited compounds as another supplemental criterion could be very useful, even if it could not include all the potential agents or already secretly developed ones, it could, if composed by experts of all countries, be complete enough to reliably indicate all the really important ones. Furthermore, since the purpose criterion would dominate as the primary one, the absence from the list would by no means exempt a chemical from the ban.

We believe that such a list of prohibited chemicals could be really useful only if accompanied by yet another amendment, namely information on the analytical facts and verification methods of each compound. If standardized verification and identification system for each compound be agreed upon, their application would greatly facilitate national verification and chemical defence measures and consequently reduce the changes of a surprise attack.

The same evaluation is even more essential to other lethal or harmful chemicals as the toxicity criterion cannot be determining for these compounds. There are numerous chemicals with ample non-hostile use with  $ld_{50}$  between 0.5-10 mg/kg., e.g. pesticides and industrial intermediates. On the other hand, many known warfare agents, before all the binary precursors, have lower toxicity. The dual purpose chemicals present a special problem. It is not possible to control the production or use of such common chemicals as hydrogen cyanide or phosgen. Their ban must be based upon the purpose criterion. A large part of important chemical agents, for instance mustards could, however, be defined by means of chemical structure and be