PHARMSOL NEWS

DRUG SUBSTANCES — MANAGING RISKS

JULY 2020 EDITION

PSNL/0011/07/2020

There has been increasing focus on targeted therapies in specialized areas, such as oncology, where potent compounds serve a key role in patient treatment. Any drug substances manufacturing facility handling these compounds must be equipped with the appropriate methods, controls, and expertise to ensure the safety of its employees and the integrity of its product. Managing these risks requires a knowledgeable team as well as the design and implementation of an effective safety program.

Evaluating the Safety of Drug Substances

It should be done by an environment, health, and safety (EHS) expert. When a new compound comes to a facility, its acceptable daily exposure (ADE) (known in Europe as permitted daily exposure or PDE) and threshold of toxicological concern (TTC) should be determined using a scientific evaluation of all pharmacological and toxicological data (non-clinical and clinical). The methodology for calculating this data is outlined in the European Medicines Agency's (EMA) document titled Guideline on Setting Health-Based Exposure Limits for Use in Risk Identification in The Manufacture of Different Medicinal Products in Shared Facilities.

Preventing Cross Contamination

The International Society for Pharmaceutical Engineering (ISPE) provides a "scientific, risk -based approach to managing the risk of cross contamination" in shared facilities which is based on ICH Q9 guidance and it focuses on four exposure routes:

- Mix-up (wrong material being used)
- Retention (residues left in equipment after cleaning)
- Mechanical transfer (transfer of material on contaminated non-product contact surfaces)
- Airborne transfer (material movement through air)

Sufficient engineering controls, cleaning procedures and cleaning validation at each stage of manufacturing are also imperative in a facility handling potent compounds.

The industry-accepted level of concentration of potential API after cleaning is below 1/1000th of the drug's daily dose, which will prevent cross contamination with the next product.

Evaluating a CDMO Vs Setting up own manufacturing facility

If there is planning on working with a potent compound, one must need to weigh the investment necessary to bring these capabilities in-house or to outsource them to a competent partner. However, it is important you verify that any potential partner has the experience, knowledge, and capabilities to safely manufacture potent compounds.

When evaluating CDMOs, it is must to find out if the containment systems and cleaning procedures are in place. It should also have analytical lab to measure the daily exposure limits and a QA group that monitors the results and can provide with documentation that the facility meets regulatory requirements.

Facility operators should be trained on not only proper handling procedures but also what to do in the case of an emergency, such as decontamination if there is an uncontrolled release of a powder or material.

With a drug development process that is already complex and costly, finding a partner with proven technical expertise and facility preparedness can give you the confidence and resources you need for a promising future in today's competitive industry.

How PharmSol can help you?

1. ***Support for evaluating safety of a compound***
2. ***CRAMS support for APIs***
3. ***End to end facility certification support from EU / TGA / US FDA***
4. ***cGxP audit of the chosen CDMO as per EU / US /PIC/s, OSHA guidelines***
5. ***Turnkey solutions for setting up a greenfield API manufacturing facility***

Get in touch with our experts info@pharm-sol.com

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