

## ORGANIZATION OF RADIATION AND CHEMICAL PROTECTION AND PROCEDURE FOR IMPLEMENTATION OF PROTECTIVE MEASURES UNDER COMBAT CONDITIONS

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### **Abstract**

The article reveals the applied aspects of the functioning of the radiation and chemical protection system (RHZ) in modern combat conditions. The work analyzes the sequence of actions of the medical service and personnel when exposed to the factors of weapons of mass destruction. Methods of conducting exploration, the procedure for switching to protective equipment and the organization of degassing and decontamination measures are considered. Particular attention is paid to maintaining the functionality of units through timely indication of threats and the use of personnel protective equipment.

**Keywords:** RHZ, radiation reconnaissance, degassing, decontamination, special treatment, medical protection, WMD.

### **Introduction**

In modern armed conflicts, radiation and chemical protection has ceased to be an auxiliary discipline and has become a key element in the survivability of troops. Radioactive and toxic substances have the ability to instantly disable large numbers of personnel, placing a critical burden on medical services. The experience recorded in the fundamental works on military toxicology and the tactics of the medical service confirms: the success of the defense depends not only on knowledge, but also on the algorithms of actions worked out to automatism. This article describes the stages of activities from the receipt of the primary alarm signal to the completion of sanitary cleaning.

1. Situation detection and control cycle. Protective measures begin with providing an information field, since without accurate data on the scale of the threat, any actions will be chaotic. Radiation monitoring is carried out using dose rate measuring devices such as IMD-21 or DP-5V, in order not only to record the level of radiation, but also to determine safe corridors for maneuvering troops. The key role is played by individual radiation control using ID-1 dosimeters, which allows you to replace devices in a timely manner and prevent the development of mass radiation sickness.

Chemical reconnaissance requires an instant response, as time goes on for seconds. The work is carried out using automatic devices and manual sets of water chemistry. If the presence of persistent chemical warfare agents is confirmed, the algorithm of personnel actions changes dramatically: the timing of wearing skin protection products increases, and the evacuation of victims requires complete isolation.

2. Practice of barrier protection. As soon as the threat is fixed, the regulations for the use of individual (PPE) and collective protective equipment come into force.

Personal aids include gas masks and UZK protective suits, and their wearing and wearing are subject to strict standards. Violation of the tightness of PPE under conditions of chemical contamination makes other medical measures ineffective. At biological risk, anti-plague kits are additionally used to ensure complete isolation of personnel.

At the collective level, sealed shelters with filter ventilation (HLF) are used, which allow personnel to periodically remove PPE for rest and eating. The entrance and exit from such facilities is regulated by gateway procedures that exclude the introduction of polluted air inside.

3. The medical component in the RHZ system. The medical service supplements the technical protection with a pharmacological shield.

Radioprotectants: When receiving a forecast about the radiation trail, the personnel takes drugs (for example, cystamine) from individual first-aid kits. This creates a temporary "barrier" in the body that reduces the destructive effect of radiation.

Antidote care: In the focus of lesions with organophosphorus substances, the life-saving order is based on the immediate self-administration of antidotes (athinone or analogues) through syringe tubes. This is a critical step that must be completed before irreversible changes in the nervous system develop.

4. Procedure for special treatment. This treatment is a multi-stage process for the elimination of contamination.

Partial processing is carried out by the military themselves: dust is removed from weapons and equipment, leather is treated with solutions from individual IPP-11 bags, which allows you to gain time before entering a safe area.

Full processing is carried out at special processing points (PuSO). Here auto-filling stations (ARS) and disinfection-shower installations (DDA) come into play. The procedure includes a complete washing of people with a change of underwear and deep degassing (or decontamination) of equipment with special compositions. Only after instrumental confirmation of the absence of infection is the unit considered to have regained combat effectiveness.

## Conclusion

The effectiveness of RHZ is ensured by strict adherence to action algorithms. It is impossible to proceed to full processing without first providing personal protection and it is impossible to start evacuation without degassing transport. A clear stage, from the moment the sensors are triggered to the final check at the PuSO, forms the safety system that allows the troops to operate in the conditions of using WMD. The study of this order, enshrined in the classic textbooks of military medicine, remains a basic requirement for any future doctor and commander.

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