GUIDELINES FOR THE PREPARATION AND DEFENSE OF THE MASTER'S THESIS

1. Normative references

1.1 These Guidelines for the preparation and defense of a master's thesis (hereinafter - Guidelines) are developed in accordance with the following documents:

- Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III "On Education" (with amendments and additions as of December 22, 2016);
- State compulsory standard of postgraduate education, approved by the decree of the Government of the Republic of Kazakhstan dated August 23, 2012 No. 1080 (with amendments and additions as of May 13, 2016);
- The rules for organizing the educational process on credit technology of education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 No. 152 (with amendments and additions dated January 28, 2016);
- Standard rules for the activities of organizations of higher and postgraduate education, approved by the Government of the Republic of Kazakhstan dated May 17, 2013 No. 499;
- Standard rules for current monitoring of progress, intermediate and final certification of students in higher educational institutions, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated March 18, 2008 No. 125 (with amendments and additions as of November 16, 2016).
- Interstate standards: GOST 7.32-2001 (changes from 2006). Research report. Structure and design rules;
- GOST 7.1-2003. Bibliographic record. Bibliographic description. General requirements and rules for compiling.

2. General provisions

2.1 Methodological recommendations determine the mandatory requirements for the structure, content and design of dissertations performed by students of professional master's degree programs at the Al-Farabi Kazakh National University (hereinafter referred to as the university).

2.2 Master's thesis is a final qualifying scientific work, which is a generalization of the results of independent research by a master's student of one of the urgent problems of a particular specialty of the corresponding branch of science, which has internal unity and reflects the course and results of the development of the chosen topic.

2.3 Master's thesis - the result of the research / experimental research work of the master student, carried out during the entire period of study. The defense of a master's thesis is the final stage of the master's preparation.

2.4 The purpose of the master's thesis is to demonstrate the level of scientific / research qualifications of the undergraduate, the ability to independently conduct scientific research, test the ability to independently conduct scientific research, carry out project work, systematize, summarize factual materials, as well as independently

substantiate conclusions and practical recommendations based on the results of the research.

2.5 The master's thesis is the basis for awarding a graduate with an academic master's degree in the relevant specialty. The results of the work should indicate that the author has the appropriate competencies in the chosen field of professional activity.

2.6 Master's theses, before being submitted for defense, must undergo pre-defense and a check by the issuing department for the availability of borrowed material without reference to the author and source of borrowing. If evidence of deliberate plagiarism is found in the dissertation work, the applicant is not allowed to defend the dissertation and is subject to expulsion from the university in accordance with the established procedure.

2.7 The procedure for the defense of master's theses is determined by the normative documents of the Ministry of Education and Science of the Republic of Kazakhstan and the “Regulations on the final certification in the magistracy and doctoral studies” of the university. Defended master's theses are subject to transfer and storage in the archives of the university in accordance with the established procedure.

3. Requirements for the topic and content of the master's thesis

3.1 The topic of the master's thesis is discussed at a meeting of the graduating department, the Academic Council of the faculty, university and is approved by the order of the university during the first two months of study. At the same time, the scientific supervisor of the undergraduate student is appointed, under whose leadership the research / experimental research work and the implementation of the dissertation are carried out, with the award of a master's degree. In the case of a master's thesis at the intersection of various specialties, it is allowed to appoint scientific consultants and co-directors of the dissertation research.

3.2 The list of topics for master's theses is formed by the department, taking into account the topics of scientific schools of the department, university (directions of research of the department, university), as well as research work (R&D) carried out at the department, at the university, including intra-university R&D, and R&D carried out in accordance with the results of competitions, as well as scientific and / or practical interests of the undergraduate. This list of topics should be updated annually by at least 30%.

3.3 The master student is given the right to choose the topic of the master's thesis, or he (she) can offer his (her) own topic with the necessary justification for the feasibility of its development.

3.4 Work on the master's thesis is carried out in accordance with the individual plan of the master's student. The individual plan is the main guiding document that determines the specialization, content, volume, terms of training in the magistracy and the forms of its certification. It also formulates the topic of the master's research.

3.5 When choosing a topic for a master's thesis, one should be guided by

the following:

• to take into account the relevance of the topic and compliance with the current state and prospects for the development of science, technology and technology;

• to take into account the degree of elaboration and illumination of it in the literature;

• be based on the possibility of obtaining experimental data in the process of working on the thesis;

• be guided by the interests and needs of enterprises and organizations, on the materials of which the work will be done.

3.6 The topic of the master's thesis can be changed at the request of the master's student with an indication of the reason with the approval of the scientific supervisor and the head of the department.

Changing the topic of the dissertation research is considered at the meetings of the department, the Academic Council of the faculty and is formalized by the order of the rector.

3.7 The research work of students of the scientific and pedagogical direction of the magistracy:

- must correspond to the main problems of the specialty in which the dissertation is being defended;
- should be relevant, contain scientific novelty and practical significance;
- should be based on modern theoretical and technological achievements of science and practice;
- should be carried out using modern methods of scientific research;
- should contain research (methodological, practical) sections on the main protected provisions;
- should be based on international best practices in the relevant field of knowledge.

3.8 Experimental and research work of students of the profile direction of the master's program:

- must correspond to the main problems of the specialty in which the dissertation is being defended;
- should be based on modern achievements of science, technology, production and contain specific practical recommendations, independent solutions to managerial and other problems;
- should be carried out using advanced information technologies;
- should contain experimental and research (methodological, practical) sections on the main defended provisions.

3.9 The implementation of research / experimental research work and the preparation of a master's thesis should contribute to the formation of the following key competencies in the graduate to:

• be able to extract, process and use information for professional purposes;

• possess advanced highly specialized theoretical knowledge and practical skills that serve as the basis for the implementation of scientific research and an original approach to solving professional problems;

• know the methodology and methodology for processing empirical (research) material and be able to use them in scientific and practical activities;

• be able to critically comprehend and use professional knowledge, including of an interdisciplinary nature;

• have specialized problem solving skills necessary for research and / or innovation in order to create new knowledge and methods in the integration of knowledge from various fields;

• have communication skills, express their thoughts logically and reasonably, be able to work in a team, be able to take responsibility for their contribution to professional knowledge and professional activity;

• have the ability to original solution of a specific problem in the area of the chosen specialization;

• be able to manage and transform professional situations that are complex and unpredictable and require new strategic approaches.

3.10 The master's thesis must meet the following requirements:

- the work should conduct research or solve urgent problems in this field of science;
- work should be based on the identification of important scientific problems and their solution;
- decisions must be scientifically grounded and reliable, have internal unity;
- the thesis should be written individually.

3.11 The content of a master's thesis is a new material that includes a description of new factors, phenomena, patterns or a generalization of previously known positions from other scientific positions or in a new aspect.

3.12 The content of the master's thesis reflects the initial premises of scientific research, its course and the results obtained. The content of the thesis should provide convincing arguments in favor of the chosen concept. The points of view contradicting her should be subjected to a comprehensive analysis and critical assessment. Discussion and polemical material are elements of the dissertation.

3.13 The content of the master's thesis should include the following provisions:

- substantiation of the relevance, theoretical and practical significance of the research topic;
- analysis of the condition of the issue in the direction of research;
- setting the goal and specific objectives of the research;
- definition of the object and subject of research;
- choice of methodology and research methods;
- description of the stages and process of the research;
- formulation of conclusions and assessment of the results obtained;
- determination of the validity, reliability and scientific novelty of the results obtained.

3.14 The results of the master's thesis submitted for defense must be published. The main results of a master's thesis must be presented in at least one publication and / or one presentation at a scientific and practical conference.

Publications can be equated to prepatents (patents), reports, abstracts of international, republican and regional conferences, analytical reviews.

4. The structure and design of the master's thesis

4.1 Structural elements of a master's thesis:

- title page;
- one page abstract in three languages (Kazakh, Russian and English);
- content;
- normative references;
- definitions;
- designations and abbreviations (if necessary);
- introduction;
- the main part consisting of sections, subsections and paragraphs (the latter, if necessary);
- conclusion;
- list of references;
- appendices (if necessary).

4.2 The title page is the first page of the thesis and serves as a source of information needed to process and search the document. The following information is given on the title page of the thesis:

- full name of the ministry, educational institution, faculty and department (each with a capital letter);
- type of work - master's thesis;
- the name of the topic of the master's thesis with the indication «on the topic:»,
- code and name of the specialty;
- on the left - the word “Prepared by”, on the right opposite the surname and initials of the master's student;
- in the line below the “Scientific Supervisor” is written and the surname and initials, academic degree, academic rank, and other regalia of the supervisor are indicated;
- “Approved for defense”, protocol number and date
- approval signature of the head of the department and the normative controller;
- city, year.

The template for the design of the title page is given in Appendix 1.

The title page must have the personal signature of the applicant, scientific supervisor, as well as the signature of the head of the department. The title page is included in the general page numbering of the thesis. The number on the title page is not put down.

4.3 The abstract should contain information about the volume of work, the amount of illustrative material, the main ideas and conclusions of the study, the degree of novelty and the practical significance of the results obtained. The abstract should not exceed one page.

4.4 The content of the thesis includes an introduction, serial numbers and titles

of all sections, subsections, paragraphs, conclusion, a list of sources used and the title of appendices, indicating the page numbers from which these elements of the thesis begin.

4.5 The structural element “Normative references” contains a list of standards that are referenced in the text of the thesis. The list of referenced standards begins with the words “This thesis uses references to the following standards”. The list includes designations of standards and their names in ascending order of registration numbers of designations.

4.6 The structural element “Definitions” contains definitions necessary to clarify or establish the terms used in the thesis. The list of definitions begins with the words: “In this thesis, the following terms are used with the corresponding definitions."

4.7 The structural element “Designations and abbreviations” contains a list of designations and abbreviations used in the thesis. The notation and abbreviations are recorded as they are mentioned in the thesis text or in alphabetical order with the necessary decoding and explanations. It is allowed to give definitions, designations and abbreviations in one structural element “Definitions, designations and abbreviations”.

4.8 The structural element “Introduction” should contain an assessment of the current condition of the problem being solved, the basis and initial data for the development of the topic, the justification for the need for this research (experimental research) work. The introduction should reflect the relevance and novelty, theoretical and practical significance of the topic of work, define the object and subject of research, the choice of methodology and research techniques, set the goal and specific objectives of the research.

4.9 The main part of the thesis should contain the choice of the direction of research, methods for solving problems and their comparative assessment, a description of the chosen general methodology for conducting research (experimental research) work, new materials or generalize previously known provisions from other scientific positions or in a new promising aspect. The same part should contain a generalization and assessment of research results, including an assessment of the completeness of the solution to the problem, comparison with similar results of domestic and foreign works.

4.10 The conclusion of the master's thesis should contain:

- brief conclusions based on the results of the dissertation (thesis) research;
- an assessment of the completeness of the solutions to the objectives posed;
- the development of recommendations for the specific use of the results;
- an assessment of the technical and economic efficiency of the implementation.

4.11 The structural element “List of references” should contain information about the sources used in writing the dissertation. The List of references is drawn up in accordance with Appendix 3. When preparing the master's thesis, it is recommended to use modern scientific articles on the problem under study, published in leading international scientific journals. It is recommended to include materials related to the completed dissertation in the structural element

“Appendices”.

4.12 Master's theses are issued in the state, Russian or English languages.

4.13 The technical requirements for the registration of a master's thesis must meet the criteria established for the dissertation (Appendix 2). Typos, misprints and graphic inaccuracies discovered during the preparation of the dissertation may be corrected by erasing or painting over with white paint and applying the corrected text (graphics) in the same place in a typewritten way or in black ink, paste or black ink - in a handwritten way. Surnames, names of organizations, names of products and other proper names in the dissertation are given in the original language. It is allowed to transliterate proper names and give the names of organizations translated into the language of the dissertation with the addition (at the first mention) of the original name.

4.14 The master's thesis should be performed by computer method on one side of a sheet of A4 white paper, single interval, in Times New Roman font, size of type 14, margins: left margin - 30 mm, right margin - 10 mm, top - 20 mm, bottom - 25 mm.

4.15 The recommended volume of a master's thesis is 60-80 pages for natural science and technical specialties, for social and humanitarian specialties the volume of the thesis can reach 100-120 pages. Appendices are not included in the specified volume of the thesis.

Agreed:

Vice-rector for scientific
and innovative activities — Ramazanov T.S.

Director of the Department
of Academic Affairs — Mukhitdinova T.M.

Introduced:

Head of the Department of Training
and Certification of Scientific Personnel — Kudaibergenova R.E.

Head of methodical work service — Zhakupova G.T.

Appendix 1
Template for the design of the title page

Ministry of Education and Science of the Republic of Kazakhstan

Al-Farabi Kazakh National University

Faculty (faculty name)

Department (name of department)

MASTER'S THESIS

on the topic: “The topic of the master's thesis”

by specialty CODE – “specialty”

Prepared by: _____ Full name
(signature)

Scientific adviser: _____ Full name
(signature)

academic degree, academic title

Approved for defense

Protocol № ___ from _____20__ y.

Head of Department _____ Full name
(signature and stamp)

Normative controller _____Full name
(signature)

Almaty, 20____

Appendix 2

Technical requirements for the registration of a master's thesis

Headings of sections, subsections and paragraphs should be typed with paragraph indentation with a capital letter without a period at the end, without underlining. If the title consists of two sentences, separate them with a period.

The pages of the thesis should be numbered with Arabic numerals, observing continuous numbering throughout the text of the thesis. The page number is put in the center of the bottom of the sheet without a dot.

The title page is included in the general page numbering. The page number is not put on the title page. Illustrations and tables located on separate sheets are included in the general pagination of the thesis. Illustrations, tables on a sheet of A3 format are counted as one page.

Sections of the thesis should have serial numbers within the entire work, denoted by Arabic numerals without a period and written with paragraph indentation. Subsections should be numbered within each section. A subsection number consists of section and subsection numbers, separated by a dot. At the end of the subsection number, a full stop is not put.

Sections, like subsections, can consist of one or more paragraphs.

If the dissertation does not have subsections, then the numbering of paragraphs in it should be within each section, and the paragraph number should consist of the section and paragraph numbers, separated by a dot. There is no full stop at the end of the paragraph number.

Example - Numbering of paragraphs of the first and second sections of the thesis

1 TYPES AND MAIN DIMENSIONS

1.1

1.2

1.3

2 TECHNICAL REQUIREMENTS

2.1

2.2

2.3

Each structural element of the thesis should be started on a new sheet (page).

The numbering of pages of the thesis and appendices included in the thesis must be continuous.

Design of illustrations

Illustrations (drawings, maps, graphs, schemes, computer printouts, diagrams, photographs) should be placed in the dissertation immediately after the text in which they are mentioned for the first time or on the next page. Illustrations can be computer-generated, including color ones. All illustrations should be referenced in the dissertation.

Drawings, graphs, diagrams, schemes, illustrations placed in the dissertation must comply with the requirements of the state standards of the Unified System for

Design Documentation (USDD).

It is allowed to execute drawings, graphs, diagrams, schemes by using computer printing.

Illustrations, with the exception of illustrations in the appendices, should be numbered with Arabic numerals consecutively.

If there is only one figure, then it is designated “Figure”, the word “Figure” and its name are placed in the middle of the line.

It is allowed to number illustrations within the section. In this case, the illustration number consists of the section number and the sequential number of the illustration, separated by a period. For example, “Figure 1.1”.

Illustrations must have a title and, if necessary, explanatory data (figure text). The word “Figure” and its name are placed after the explanatory data and positioned as follows: Figure 1 - Details of the device. The illustrations of each appendix are denoted by separate numbering in Arabic numerals with the addition of the designation of the appendix before the number. For example, Figure A.3.

When referring to illustrations, one should write “... in accordance with Figure 2” with continuous numbering and “... in accordance with Figure 1.2” with numbering within the section.

Design of Tables

Tables are used for better clarity and ease of comparison of indicators. The name of the table should reflect its content, be precise and concise. The name of the table should be placed above the table on the left, without indentation, in one line with its number separated by a dash.

When transferring part of the table, the title is placed only above the first part of the table, the lower horizontal line limiting the table is not drawn.

The table should be placed in the thesis immediately after the text in which it is mentioned for the first time, or on the next page. All tables should be referenced in the dissertation. When referring, you should write the word “table” with its number.

A table with a large number of lines can be transferred to another sheet (page). When transferring a part of the table to another sheet (page), the word “Table” and its number are indicated once on the left above the first part of the table, above the other parts they write the word “Continuation” and indicate the number of the table, for example: “Continuation of table 1”. When transferring a table to another sheet (page), the heading is placed only above its first part.

A table with a large number of columns can be divided into parts and placed one part under another within one page. If the rows and columns of the table go beyond the page format, then in the first case, the head is repeated in each part of the table, in the second case, the side.

If the text repeated in different lines of the table column consists of one word, then after the first spelling it is allowed to replace it with quotes; if from two or more words, then at the first repetition it is replaced with the words “The same”, and then with quotation marks. It is not allowed to put quotation marks instead of repeating numbers, marks, signs, mathematical and chemical symbols. If digital or other data is not given in any line of the table, then a dash is put in it.

Tables, with the exception of annex tables, should be numbered with Arabic

numerals sequentially. It is allowed to number tables within a section. In this case, the table number consists of the section number and the table number, separated by a dot. The tables of each annex are designated by separate numbering in Arabic numerals with the addition of the designation of the appendix in front of the digit.

If there is one table in the document, then it should be designated “Table 1” or “Table B.1” if it is given in the appendix.

The headings of the columns and rows of the table should be written with a capital letter in the singular, and the subheadings of the graph - with a lowercase letter, if they make up one sentence with a heading, or with a capital letter, if they have an independent meaning. At the end of the headings and subheadings of tables, periods are not put.

Tables on the left, right, and bottom are usually delimited with lines. It is allowed to use a font size smaller in the table than in the text.

It is not allowed to separate the headings and subheadings of the sidebar and the graph with diagonal lines.

Horizontal and vertical lines delimiting the rows of the table may not be drawn if their absence does not complicate the use of the table.

As a rule, graph headers are written parallel to the table rows. If necessary, the perpendicular arrangement of the headings of the columns is allowed. The head of the table should be separated by a line from the rest of the table.

Example of table design

Table 1 - Distribution of the coefficient of daily periodicity of individual cells of the leukocyte formula

Types of cells	Control		Ice-resistant stationary platform, 7th day	
	winter	summer	winter	summer
Neutrophils	0,93	0,87	0,91	1,09
Eosinophils	1,30	2,46	0,75	1,46
Monocytes	1,07	1,54	0,79	1,14
Monocytes	1,01	1,03	1,04	0,93

Design of notes, formulas, equations, references, list of definitions, symbols, abbreviations and appendices

The word "Note" should be capitalized from the paragraph and not underlined. Notes are given in the thesis, if explanations or reference data are needed to the content of the text, tables or graphic material. Notes should not contain requirements.

Notes should be placed immediately after the text, graphic material or in the table to which these notes refer. If there is only one note, then a dash is placed after the word "Note" and the note is printed with a capital letter. One note is not numbered. Several notes are numbered sequentially in Arabic numerals without a period. A note to the table is placed at the end of the table above the line indicating the end of the table.

Formulas and equations should be separated from the text on a separate line. Above and below each formula or equation, at least one free line must be left. If the equation does not fit on one line, then it must be wrapped after the equal sign (=) or after the plus (+), minus (-) signs, multiplication (*), division (:), or other mathematical signs, and the sign in the beginning of the next line is repeated. When transferring a formula to a sign symbolizing the operation of multiplication, use the sign “x”.

An explanation of the meanings of symbols and numerical coefficients should be given directly under the formula in the same sequence in which they are given in the formula.

Formulas in the dissertation work should be numbered with ordinal numbering within the entire dissertation in Arabic numerals in parentheses in the extreme right position on the line. If the design of the explanatory note is carried out in the text editor MS Word, then for the set of formulas it is necessary to use the formulas editors Microsoft Equation or Math Type.

Formulas placed in appendices should be numbered separately with Arabic numerals within each annex with the addition of an appendix designation before each digit, for example, formula (B.1).

References in the text to ordinal numbers of formulas are given in brackets. In the dissertation, it is allowed to execute formulas and equations in handwritten black ink. In the thesis, references to the Manual for the preparation of the thesis and the abstract, standards, specifications and other documents are allowed, provided that they fully and unambiguously define the relevant requirements and do not cause difficulties in using the document.

Reference should be made to the document as a whole or to its sections and appendices. References to subsections, paragraphs, tables and illustrations are not allowed, except for subsections, paragraphs, tables and illustrations of this Manual.

When referring to standards and technical specifications, only their designation is indicated, while it is allowed not to indicate the year of their approval, provided that the standard is fully described in the list of sources used (List of references).

References to the sources used should be given in square brackets. In case of repeated reference to the same source, in square brackets, in addition to the serial number of the source, the corresponding page is put down.

The list of definitions, designations and abbreviations, conventions, symbols, units of physical quantities and terms should be arranged in a column. On the left, in the order of mention or in alphabetical order, abbreviations, conventions, symbols, units of physical quantities and terms are given, on the right - their detailed decoding.

Information about sources should be arranged in the order of appearance of references to sources in the text of the thesis and numbered with Arabic numerals without a period and printed with paragraph indentation.

Appendices are drawn up as a continuation of this dissertation on its subsequent pages or issued as an independent document. All appendices should be referenced in the thesis text. Appendices are arranged in the order of references to

them in the text of the thesis.

Each appendix should start on a new page with the word “Appendix”, its designation and degree indicated at the top in the middle of the page.

The appendix must have a title, which is written symmetrically relative to the capitalized text on a separate line.

Appendices are designated in capital letters of the Russian alphabet, starting with А, with the exception of the letters Ё, З, И, О, Ч, Ь, Ы, Ъ. The word “Appendix” is followed by a letter indicating its sequence.

If a document has one attachment, it is referred to as "Appendix А".

The text of each appendix, if necessary, can be divided into sections, subsections, paragraphs, subparagraphs, which are numbered within each appendix. The number is preceded by the designation of this appendix.

The appendices should have a sequential pagination in common with the rest of the thesis.

Appendix 3
An example of formatting a list of references

LIST OF REFERENCES (LIST OF USED SOURCES)

1 Tulegenova G.S. Biologiya transplantirovannyh opuholej. - Almaty: Nauka, 2003. - 216 s.

2 Efimov M.L., Askarova G.S. Sutochnye biologicheskie ritmy i zlokachestvennyj rost //Usp. Sovr. Biologii. - 2003. - T. 103, № 2 - S. 255-270.

3 Pat. 72931 SSSR. Sposob pererabotki syr'ya /'Ivanov M.I., Maldybaev N.K.; opubl. 30.03.83, Byul. № 12. - 2 s: il.

4 A.S. 386018. SSSR. Sposob izvlecheniya metallov. /A.G. Akataev, B.I. Petrov; opubl 17.05.81, Byul. №15. - 2 s: il.

5 Georgieva R.S. Izmeneniya v sisteme svertyvaniya krovi u bol'nyh zlokachestvennymi opuholyami // Voprosy eksper. i klin, onkol.: sb. nauch. Tr. Instituta onkologii i radiologii. - Almaty, 2004. - S.214-217.

6 Bazhenov L.G., Kulinskaya L.L., Sorochinskaya I.N. Sezonnye izmeneniya soderzhaniya immunoglobulinov v krovi klinicheski zdorovyh lic. //Tezisy dokl. III Vses. Konf. Po hronobiol. I hronomed. - Tashkent, 1990. - 320 s.

7 Sadykov L.P., Berezovskaya I.V. Sezonnye izmeneniya pokazatelej svertyvaniya krovi u krys i krolikov. /Institut veterinarii. - M., 1989. - 230s. - Dep. V VINITI 13.09.89, № 5853 - V 89.

8 Izuchenie kinetiki i himizma processov: otchet o NIR /ImiO AN Kaz SSR. - Almaty, 1985. - 240 s. - Inv. № 81047478.

9 Omarova G.P. Eksperimental'naya terapiya sarkomy T-1 v zavisimosti ot ee mitoticheskoj aktivnosti: avtoref. ... kand. Biol. Nauk:. 04.03.04. - M.: MGU, 2004. - 16 s.

10 Vachaspati T., Videnkin A. Evolution of cosmic nets //Psych. Rev. -2003. - Vo1. 46, № 2. - P. 1133-1140.

11 Paustovskij K.G. Zolotaya roza //Soch.: V 7 t. - M., 1984. - T. 3. -S.287-528.

12 GOST R 51771 - 2001. Apparatura radioelektronnaya bytovaya. Vhodnye i vyhodnye parametry i tipy soedinenij. Tekhnicheskie trebovaniya. - Vved. 2002-01-01. - M: Gosstandart Rossii: Izd-vo standartov, 2001. - IV, 27 s: il.

13 Strategic development plan of the Republic of Kazakhstan until 2010: approved by the Decree of the President of the Republic of Kazakhstan dated December 4, 2001, No. 735 // www.minplan.kz. 28.12.2001.