

## The State General Laboratory

The State General Laboratory (SGL) has developed over the years into a dynamic Institute providing excellent analytical services in monitoring, surveillance and control as well as consistent and coherent advisory services in its wide field of expertise, to most Ministries and government departments. It is widely recognized at national and European level.

### The mission

The SGL is the Official Government Laboratory and the main laboratory for the surveillance and monitoring of foodstuffs, pharmaceuticals, cosmetics and for the examination of controlled drugs and other police exhibits from cases brought to court of justice. In cooperation with the competent authorities it is also the principal centre for environmental monitoring and pollution control. Within the framework of its responsibilities the SGL carries out research to support the development and application of policies or to provide solutions to existing or emerging problems mainly in the areas of food safety, authenticity of products and environment and health.

### The SGL's Vision

- To be developed as a Centre of Excellence in the fields of Food Safety, Environment and Health as well as a Centre for the



transfer of scientific know-how at National, Regional and European level.

- To maximize its socio-economic contribution in the areas of Public Health and the Environment, Justice and Consumer Protection through its substantial contribution towards prevention and proactive management of problems.

**The protection of public interest, respect of people and the environment as well as the satisfaction of the citizens, are the founding principles of SGL's vision and mission.**

### Development Policy and Strategy

The policy of the SGL aims:

- a) To provide, as a specialized centre, excellent services in the area of Foodstuffs, Environment and Health, Forensic, Pharmaceuticals, Cosmetics and other consumer products.



- b) To improve its role at a national, regional and European level, as a centre for the dissemination of scientific knowledge.
- c) To support and contribute to the improvement of public and private laboratories in Cyprus through the dissemination of experience and know-how on Quality Assurance and Metrology in Chemistry.
- d) To participate in national and EU funded research.

**To achieve its goals and maintain its continuous development the SGL is currently working towards:**

- Reorganization and restructuring of its services
- Relocation to new modern facilities, and finally towards
- Its establishment as an autonomous organisation of public interest.

### Quality Assurance - Accreditation

The SGL, as a result of its role as a national official control laboratory for foodstuffs, water, pharmaceuticals, cosmetics, police exhibits etc and its aims for excellent quality, has been accredited with the National and European Standard EN ISO / IEC 17025:2005.

### International Cooperation

The SGL has an international network of colleagues/co-workers and has signed protocols of cooperation with Institutes, Universities and Organizations such as the Joint Research Center (JRC), the Environmental Agency of Austria, the University of Cyprus, the University of Athens etc. Also, members of staff participate in a wide range of expert committees and panels of the EU, the UN Environmental Protection Program, the World Health Organization, the International Forum for Chemical Safety, the European Safety Authority etc.

### Research

The SGL is dedicated to the protection of public health thus, research forms one of the fundamentals for its continuous scientific and technological development. Research is carried out which focuses primarily towards providing solutions to problems as well as supporting the development and application of policies and

legislation in all the areas of its expertise especially in the areas of environment and health, food safety, authenticity and certification of geographical origin of foods. Research is carried out primarily with EU



funds but also with national funds from the Research Promotion Foundation and the Ministry of Health.

### Main Areas of Activity

#### 1. Quality and Safety of Foodstuffs

The SGL is the Official National Laboratory for the chemical and microbiological control and surveillance of foodstuffs, covering all parts of the food production chain, from the field or farm to the consumer table including also imported foods. The focus is mainly on prevention and on foodstuffs which are consumed frequently, those where contamination is expected to be higher and those consumed by vulnerable groups e.g. children. The SGL goes one step beyond the analysis. It evaluates the degree of exposure to toxic substances and the related risks. Providing therefore scientifically sound advice to competent authorities for risk management through appropriate measures.

There are in total ten specialized laboratories staffed with highly skilled and experienced personnel and state-of-the-art equipment, which support and guarantee the extensive analytical control of foodstuffs of the highest EU standards.



Surveillance and control is carried out based on annual and multi annual programs. Sampling is carried out by the Health Inspectors of the Ministry of Health and the Municipalities, as well as the Veterinary Services.

The main areas covered are:

- **Food additives**
- **Veterinary drug residues** in meat and animal products
- **Pesticide residues** mainly in fruit and vegetables, baby foods and to a lesser extent in products of animal origin
- **Persistent organic pollutants e.g PCBs, dioxins**
- **Mycotoxins** with special emphasis on cereal products, dried fruit, nuts and milk
- **Environmental contamination of foodstuffs** by toxic substances and carcinogens such as heavy metals, nitrates/nitrites and polycyclic aromatic hydrocarbons
- **Microbiological quality control of foodstuffs**
- **Chemical and microbiological quality control of bottled water**
- **Radioactivity levels in foodstuffs**
- **Materials and products in contact with food**
- **Correct labelling and adulteration of food products and clarification of tariff classification of products**
- **Nutritional value of foodstuffs and the drafting of food composition tables**

- **Control of food supplements for the implementation of the relevant legislation and investigation for the presence of controlled and other drugs**

New areas of control have been recently developed:

- **Evaluation of the Authenticity** of products using state-of-the art instrumentation such as SNIFF-NMR
- **Genetically Modified Organisms**
- **Allergens**
- **Biological control for dioxins**

#### 2. Environment and Health

The SGL has a unique infrastructure in Cyprus to cover chemical, microbiological, virological, ecotoxicological and radiological aspects of environmental monitoring and pollution control. The three pillars of the applied approach are Innovation - Integration across disciplines - Holistic Evaluation. Seven specialized Laboratories provide a wide range of highly sophisticated and state-of-the-art analytical services and carry target oriented research. Multi-purpose-integrated programs are designed and implemented in cooperation with the competent authorities aiming at the:

- **Fulfillment of the requirements for monitoring compliance**
- **Continuous development and implementation of the environmental policy and legislation** by providing reliable laboratory results and expertise
- **Development of effective mechanisms for the early detection of pollution.** The ultimate goal is to contribute to the prevention and the long term safety and sustainability of our water resources
- **Investigation of the links between environment and health and in particular the effects of pollution on health.** Special emphasis is given to the quality of indoor

air and the effects of toxic substances on children. The SGL has a key role in the coordination and the implementation of the Cyprus Action Plan on Environment and Children's Health, Cy-CEHAP 2007-2010. In addition **biomonitoring is being developed in order to investigate the real levels of pollutants in human body.** Additional programs investigating new dangerous substances and emerging hazards, such as those substances which disturb the endocrine system in humans with focus on the embryo and child, are also investigated.

Environmental monitoring is carried out in cooperation with the competent authorities and includes:

- **Indoor and outdoor atmosphere air pollution**
- **Pollution of water resources**
- **Pollution of sea water, sediments and soil**
- **Quality of treated domestic and industrial effluents**
- **Radioactivity levels in the environment**

### 3. Forensic Science and Toxicology

The aim of the Forensic Science and Toxicology Laboratory is to provide reliable laboratory data and give impartial and objective scientific expert witnessing in court, to support the police, law enforcement authorities as well as international efforts in the fight against crime, drug trafficking and terrorism. Also, its assistance to forensic coroners in unnatural death investigations as well as its role in assisting with emergency hospital poisoning cases is of vital importance. The laboratory covers the following areas of activity:

- Analysis of **narcotics and psychoactive substances**
- Analysis of exhibits **from crime scenes**

involving **arson, explosives and other trace evidence**

- Analysis of **biological samples** for the determination of **alcohol, narcotics and psychoactive drugs, pesticides, carbon monoxide, heavy metals and other poisons**

### 4. Pharmaceutical Products and Cosmetics

The SGL has, since 1938, developed the necessary infrastructure and expertise for the physico-chemical and microbiological quality control of medicinal products with the following aims:

- To secure the quality, safety and efficacy of pharmaceutical products for humans; these include not only those currently on the market but those supplied to the public sector namely hospitals
- the substantial contribution to the development and updating of the Ministry of Health procedures concerning the quality control of pharmaceuticals
- To secure the quality and safety of veterinary medicinal products.

The quality control of pharmaceuticals is carried out on a program basis in collaboration with the Pharmaceutical Services as well as within the framework of the European Network of Official Pharmaceutical Control Laboratories.

The SGL is also the official laboratory for the quality control of cosmetics, in collaboration with the Pharmaceutical Services. The aims of the control of cosmetic products are:

- To identify those products not conforming to the requirements of current legislation e.g. the detection of prohibited substances
- Consumer protection.

### 5. Consumer Protection and Industrial Products

A wide range of analytical tests are carried out focusing on consumer protection and safety such as:

- The safety of children's toys
- Measurement of nicotine levels, tar and carbon monoxide content in cigarettes
- Control of various chemical products

### The way forward

Upon the Cyprus accession to the EU SGL has succeeded in responding to the stringent requirements of quality control and to the challenges arising from the EU Acquis. At the same time the SGL enhanced its effectiveness by integrating both EU and national targets and visions towards a better quality of life and the environment, better quality and safety of products and protection of the public at large. The SGL was also effective in procuring funds available for research and development through EU and local research funds.

The driving force for the accomplishment of the above targets and vision, has, undoubtedly been its highly competent staff which has, over the years, proved that it can set ambitious targets for continuous scientific excellence and meet very high standards.

**The SGL focuses to the future with optimism, while steadily developing into an institution with state-of-the art means, European orientation and effectiveness, openness and transparency in its perspectives and future targets.**



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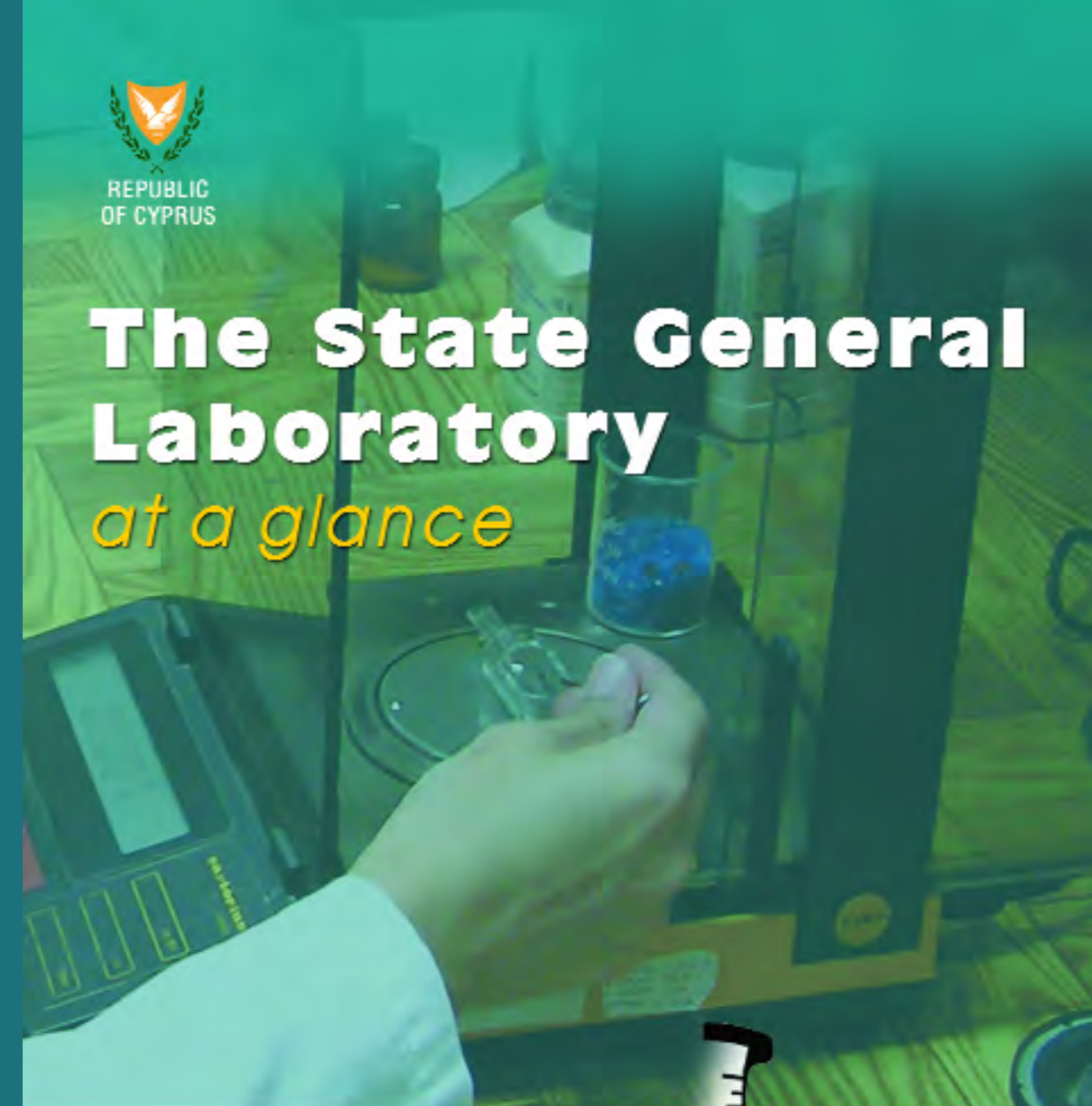


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# The State General Laboratory at a glance



Excellence for better contribution to Quality of Life

