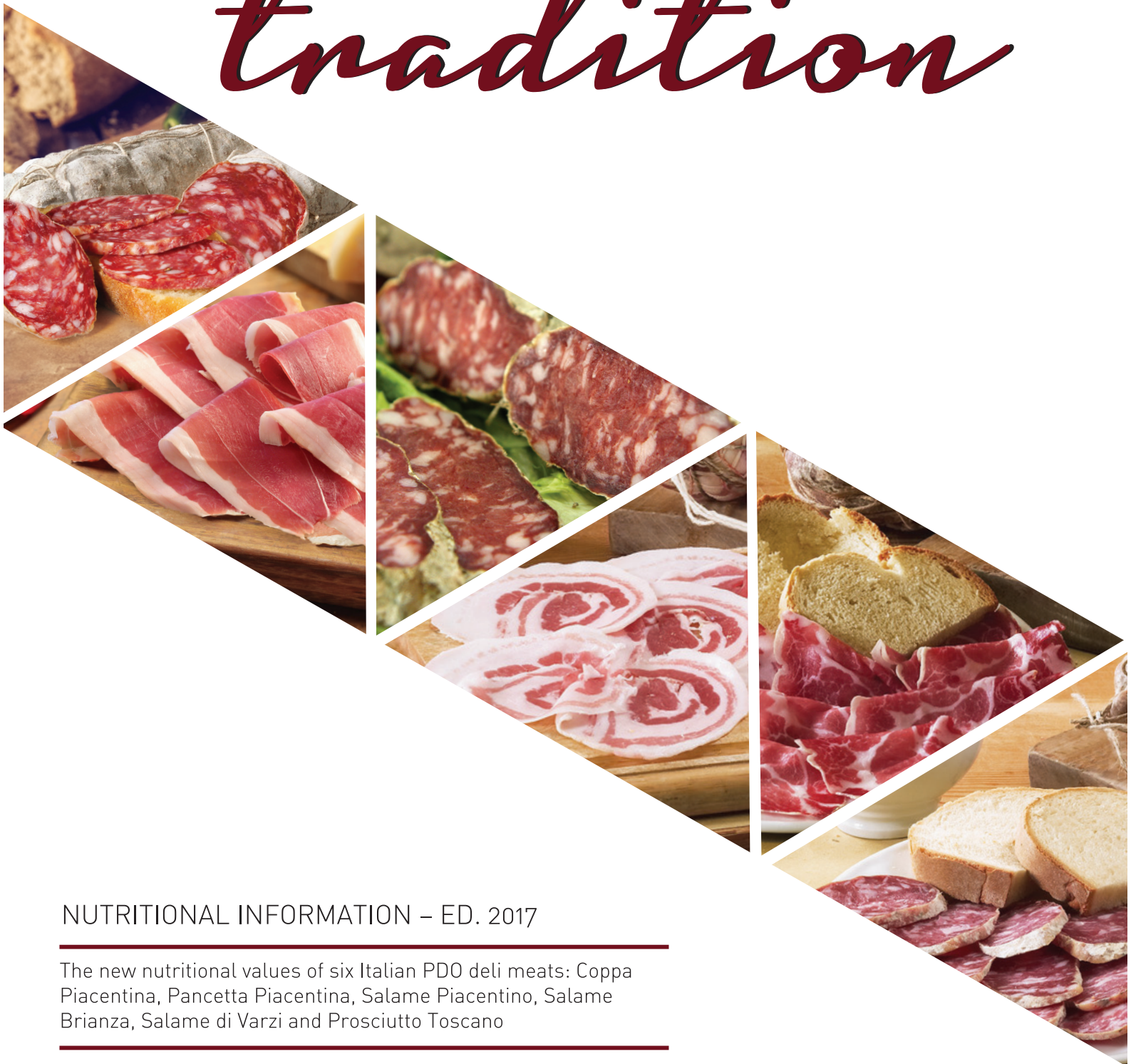




an Incomparable
culinary
tradition



NUTRITIONAL INFORMATION – ED. 2017

The new nutritional values of six Italian PDO deli meats: Coppa Piacentina, Pancetta Piacentina, Salame Piacentino, Salame Brianza, Salame di Varzi and Prosciutto Toscano

EDITORIAL

Research in nutrition focuses on the close link between food and human health, from a deep analysis of single foods to the study of their role in the prevention of some diseases. Today, it is very well-known that inadequate dietary habits play a key role in the development of a wide range of chronic conditions; on the contrary, a proper and balanced diet can help to prevent them. According to the World Health Organization (WHO), in fact, about a third of cancers and cardiovascular diseases could be avoided through the adoption of healthy eating habits. Such attention to the relation between nutrition and health has partly been driven by consumers' changing attitudes towards food. In fact they increasingly demand for both high-quality and traditional products that can be introduced in a healthy and varied diet. All these issues have substantially fostered research in nutrition, with the aim to improve, as much as possible, the quality of products on the market.

Among the high-quality Italian agri-foods known on the national market, PDO (Protected Designation of Origin) and PGI (Protected Geographical Indication) deli meats are increasingly consumed and appreciated. This reputation is tied to their typical and unique characteristics: their unique taste, their link with the geographical area in which they are produced and the achievement of a quality certification. However, such prestigious results have not stopped the work of the Italian deli meat industry which is unceasingly committed to improve the nutritional aspects of its products. An important mission involving the whole supply chain – from breeding to production technologies – in respect of traditional recipes and preparation methods.

Deli meats, in particular those awarded PDO and PGI quality logos, conjoin all these trends, thanks to their unique qualities that combine taste, tradition, culinary versatility and nutritional properties: we're talking about foods that, if properly consumed, are suitable for all age groups and their changing and different lifestyles. Based on these concerns, the Italian deli meat sector is constantly working to improve the nutritional value of its products – as recent published studies on the issue have highlighted.

This document, that has to be considered as an integration to the volumes published so far, wishes to provide an in-depth analysis of the nutritional composition of Italian deli meats, promoted by ISIT. These examinations have been conducted by the Centro di Ricerca per gli Alimenti e la Nutrizione (CREA-AN, former INRAN – Istituto Nazionale di Ricerca per gli Alimenti e la Nutrizione) and the Stazione Sperimentale per l'Industria delle Conserve Alimentari (SSICA). The present study responds, without any shadow of doubt, to the goals set by CREA-AN and represents an excellent example of collaboration between public research and the business world.

Six Italian deli meats with a PDO quality logo are at the center of this publication: Coppa Piacentina DOP, Pancetta Piacentina DOP, Salame Piacentino DOP, Salame Brianza DOP, Salame di Varzi DOP and Prosciutto Toscano DOP.

This work also provides an update and an opportunity to reflect on the Italian deli meat sector, an occasion to try to establish points of contact both with the scientific community and consumers.

I wish you a pleasant reading.

Elisabetta Lupotto
Director – CREA Research Centre
for Food and Nutrition

CREA RESEARCH CENTRE

FOOD AND NUTRITION

The new CREA-AN (Centro di ricerca CREA – Alimenti e Nutrizione) was established in 2013 after the Istituto Nazionale di Ricerca per gli Alimenti e la Nutrizione (INRAN) was incorporated into the Consiglio per la Ricerca in Agricoltura e l'analisi dell'Economia Agraria (CREA). This fusion gave birth to the **Research Center CREA-AN that has gathered INRAN's know-how, research activities and experts.**

CREA-AN has set three main objectives “**firstly, the technological and nutritional enhancement of agri-food products;** secondly, the acknowledgment as a valid scientific reference in matter of nutrition for the agri-food sector, also through the release of specific quality certifications; last but not least, the **production of updated nutritional data** for both the scientific community and consumers.” In this context, the study of the composition of Italian

deli meat products can certainly be included in CREA-AN's main objectives and also is an excellent example of partnership between the economic sector and the world of scientific research.

In this study, CREA-AN has contributed to defining the profile of nutrients (macro-nutrients, minerals, trace elements, vitamin E) and additives (sodium chloride, nitrates, nitrites).

Special acknowledgments

Special thanks go to CREA-AN's Research Group: Altero Aguzzi, Paolo Gabrielli, Emanuela Camilli, José Sanchez del Purgar Rico who, through their experimental work, have considerably contributed to the production of scientific data.

*Massimo Lucarini and Ginevra Lombardi Boccia,
CREA-AN Food Science*

SSICA

The Stazione Sperimentale per l'Industria delle Conserve Alimentari (SSICA) was founded in Parma in 1922. Its aim is to support, through activities of research, consultancy, training and dissemination, the **scientific and technological progress of the Italian industries for vegetable and animal productions.** SSICA's laboratories are equipped with high-tech machineries to conduct microbiological, chemical and sensory analyses in order to assess finished products from three perspectives: safety, nutritional quality and organoleptic properties. The Center also makes use of pilot plant equipments for testing new transformation processes and pre-industrial applications of innovative technologies for the treatment, transformation and stabilization of foods. Currently, SSICA is a Foundation of the Parma Chamber of Commerce.

Following the previous collaboration with CREA-NUT, that led, in 2011, to the publication of the volume “**ITALIAN DELI MEATS: New Values, New Value**”

(in original: *SALUMI ITALIANI: Nuovi Valori, Nuovo Valore*), SSICA has now chosen to contribute to the study of the composition of meat-based products by defining the nutrient profile of Vitamins B₁, B₂, B₃, B₆ and B₁₂, free amino acids and the antioxidant dipeptides carnosine and anserine.

Special acknowledgments

Special thanks go to SSICA's research group, in particular to Mrs. Nicoletta Simoncini for her role in the definition of nutritional profiles. Furthermore, particular acknowledgments go to the **Istituto Salumi Italiani Tutelati (ISIT)** and CREA-AN for their work of selection and sampling of the products.

*Roberta Virgili and Giovanna Saccani,
SSICA*

Criteria of data production

The experimental plan has been developed by choosing, with the help of ISIT, five manufacturing companies for each product. Such firms have provided, for each product, two similar samples in terms of aging, size and weight but belonging to two different batches of production. The general criteria adopted for data production are those suggested by the international guidelines for the production of nutritional databases (Greenfield & Southgate, Food Composition Data, Production, Management and Use, FAO, Rome, 2003). The values shown in the tables correspond to the mean value of the analyses that have been carried out.

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The present document aims to provide an update on the new nutritional values, emerged by CREA-AN's analyses, of six Italian protected deli meats and represents a supplement to previous publications. These new values reflect the deli meat sector's increasing interest and commitment towards the emerging research areas that connect nutrition and health.



01. PREFACE

PDO AND PGI: CERTIFIED QUALITY

Italy distinguishes itself in virtue of a truly unique food and agricultural product heritage in terms of richness, variety and value, especially with regards to PDO and PGI products that identifies food specialties with particular characteristics linked to their geographical origin. The sheer variety of such products is attributable to the particularity of Italian territories and history, which has enabled the creation of highly diversified production, gastronomic and cultural traditions which have stood the test of time.

01.1 ISIT (ISTITUTO SALUMI ITALIANI TUTELATI)

ISIT was established in 1999 with the aim of **coordinating, both from a strategical and operational point of view, the activities of the several Consortia representing PDO and PGI deli meats. Its main purpose is to protect, promote and look after the interests of Italy's protected deli meat sector.**

This addendum dedicated to the research project on the nutritional aspects of deli meats meets the goals of ISIT, representing a useful tool for experts who analyze the connection between nutrition and health, as well as providing a complete and updated information source for consumers.

Today ISIT has achieved a broad representativeness and currently has 16 member Consortia which protect and promote 22 PDO and PGI deli meats, true ambassadors of authentic Made in Italy in terms of quality, tradition and link with a given geographical area.

THE 16 CONSORTIA ADHERING TO ISIT:

	CONSORZIO DI TUTELA BRESAOLA DELLA VALTELLINA		CONSORZIO DEL PROSCIUTTO TOSCANO
	CONSORZIO CACCIATORE ITALIANO		CONSORZIO SALAME BRIANZA
	CONSORZIO DI TUTELA DELLA COPPA DI PARMA IGP		CONSORZIO DI TUTELA DEL SALAME FELINO IGP
	CONSORZIO DI TUTELA DEL CULATELLO DI ZIBELLO		CONSORZIO DI TUTELA DEL SALAME DI VARZI
	CONSORZIO MORTADELLA BOLOGNA		CONSORZIO DI TUTELA DEI SALUMI DI CALABRIA A DOP
	CONSORZIO PROSCIUTTO DI CARPEGNA		CONSORZIO SALUMI DOP PIACENTINI
	CONSORZIO DEL PROSCIUTTO DI MODENA		CONSORZIO TUTELA SPECK ALTO ADIGE
	CONSORZIO DEL PROSCIUTTO DI SAN DANIELE		CONSORZIO ZAMPONE E COTECHINO MODENA IGP



THE 22 DELI MEATS REPRESENTED BY ISIT



CAPOCOLLO DI CALABRIA
COPPA PIACENTINA
CULATELLO DI ZIBELLO
PANCETTA DI CALABRIA
PANCETTA PIACENTINA

PROSCIUTTO DI CARPEGNA
PROSCIUTTO DI MODENA
PROSCIUTTO DI SAN DANIELE
PROSCIUTTO TOSCANO
SALAME BRIANZA

SALAME DI VARZI
SALAME PIACENTINO
SALAMINI ITALIANI ALLA CACCIATORA
SALSICCIA DI CALABRIA
SOPPRESSATA DI CALABRIA



BRESAOLA DELLA VALTELLINA
COPPA DI PARMA
COTECHINO MODENA
MORTADELLA BOLOGNA

SALAME FELINO
SPECK ALTO ADIGE
ZAMPONE MODENA

01.2 PDO AND PGI PRODUCTS AND PROTECTION CONSORTIA

In order to recognize and promote its top quality foodstuff and agricultural products, the European Union has established two quality schemes: **Protected Designation of Origin (PDO)** and **Protected Geographical Indication (PGI)**.

PDO and PGI acknowledge and safeguard products closely linked to the territory of origin, defined as a geographical environment characterised by natural factors (climate, environmental characteristics) and human factors (production techniques passed down from generation to generation, craftsmanship, know-how).

Through PDO and PGI quality schemes, the **European Union aims to protect products**, support the production system and local economy while also protecting consumers by providing information and specifying guaranteed characteristics.

Both PDO and PGI quality logos are a safe guarantee for consumers who can be sure to buy specialties with unique characteristics and strong link with a specific production area.

In Italy, the main supervisor of PDO and PGI system

is the **Ministry of Agricultural, Food and Forestry Policies (Mipaaf)**. Its work is supported by the help of other not-for-profit institutions – the **Consortia** – whose main activity is the protection, the promotion and the enhancement of these products.

Protected Designation of Origin (PDO) identifies foodstuff and agricultural products whose specific characteristics are due essentially to a particular geographical environment. The whole production process must be compliant with a precise product specification, in accordance with the traditional recipe. To obtain this quality logo, all stages of production, processing and preparation must take place in the geographical area.

Protected Geographical Indication (PGI) identifies foodstuff and agricultural products linked to a given geographical area to which can be attributed a specific quality, reputation or other characteristic. The whole production process must be compliant with a precise product specification, in accordance with the traditional recipe. To obtain this quality logo at least one of the stages of production, processing or preparation must take place in the defined area.

02 - NUTRITIONAL ANALYSES: WHAT'S NEW IN 2017

In order to integrate and update a work started years ago, new nutritional analyses have been conducted on six PDO deli meats: Coppa Piacentina, Pancetta Piacentina, Salame Piacentino, Salame Brianza, Salame di Varzi and Prosciutto Toscano (the one with fat removed is considered too). The analyses of the updated nutritional values of these products are a further evidence of the nutritional evolution of Italian deli meats. They represent a reliable reference point for producers, experts in the field of health and nutrition and consumers. These results confirm the positive trend of nutritional improvement, which emerged from the analyses conducted in 2011.

02.1 THE EVOLUTION OF ITALIAN DELI MEATS

Deli meats, in particular those with PDO and PGI logos, are one of the excellence of Italian gastronomy. They tell about ancient, prestigious skills and traditions and embody the cultural and historical identity of their territory of origin. Today, they are known and appreciated not only for their typical taste and culinary versatility but also for their increasing nutritional value. An essential peculiarity responding to consumers' growing demand

for high-quality products having a close link with their geographical area of origin and that can be included in a healthy and balanced diet.

The latest, advanced technologies of breeding, transformation and conservation have, indeed, **increased the nutritional value of deli meat products, reducing, for example, the content of fats, salt and nitrites/nitrates.**



THE WORK DONE OVER THE YEARS BY THE WHOLE ITALIAN DELI MEAT SECTOR HAS RESULTED IN A CONSTANT NUTRITIONAL IMPROVEMENT OF ITS PRODUCTS. AN IMPROVEMENT, CONFIRMED BY THE LATEST ANALYSES, THAT HAS ALLOWED TO SATISFY CONSUMERS' NEW NEEDS AND LIFESTYLES, GIVING ALSO NEW IMPULSE TO THIS FOOD SECTOR



Over the last decades, there has been a significant improvement of the fat profile of pigs, thanks, as said before, to the evolution of breeding techniques and feeding systems, based mostly on vegetables, minerals and vitamins.

Even the content of salt has been considerably reduced in deli meats. It is important to point out, however, that sodium chloride is an essential substance because not only confers the typical sensory peculiarities to foods but also plays a **fundamental role in preserving** them; this is the reason why its reduction can be done within certain limits in order to guarantee the microbiological stability of the product. From a nutritional point of view, it is important to remember that sodium is a nutrient essential to the functioning of the body if taken in the right amount.

Likewise, important progress has been made in the reduction of preservatives and additives legally approved, as highlighted in the study by INRAN-SSICA dating back 2011. Nitrites and nitrates are necessary to make deli meats safe for eating: thanks to new and innovative production techniques, it has been possible to limit the excessive utilization of preservatives and keep, at the same time, the original characteristics of products, the unique flavors and the safety standards. The six deli meats chosen for the present study, indeed, show quantities of nitrites and nitrates in line with results obtained in 2011.

02.2 LIPID CONTENT

A healthy diet should include a **daily, proper intake of lipids, accounting for 20–35% (EFSA 2010) of total calories** consumed by a healthy adult who performs moderate physical activity. Particular attention, however, should also be paid to the quality of lipids. A concept more and more widespread by the modern deli meat sector whose principles are now based on the **reduction of lipids** and the consequent **improvement of their nutritional composition**. In detail, considering the total lipid content of

the six products studied in this booklet, it can be observed a homogeneity in the fat composition of Salame Piacentino, Salame Brianza and Salame di Varzi (a similarity was also found between Salame Napoli and Salame Milano analyzed in the previous research). As for Prosciutto Toscano, it has been found a lipid content of 22.8% that **drops to 8.8% if the peripheral layer of fat is trimmed away**: a significantly restrained quantity that confirms the excellent work done along the entire supply chain.

*The full version
of the following tables
is available in
the appendix*

	CHEMICAL COMPOSITION AND ENERGETIC VALUE per 100 gr				
	Water (g)	Proteins (g)	Lipids (g)	Energy (kcal)	Energy (kJ)
Coppa Piacentina DOP	29.1	28.6	36.4	447	1870
Pancetta Piacentina DOP	29.3	14.5	51.1	521	2180
Salame Piacentino DOP	35.5	31.9	29.8	398	1665
Salame Brianza DOP	32.8	31.1	32.8	423	1770
Salame di Varzi DOP	34.2	31.0	31.0	412	1724
Prosciutto Toscano DOP	43.5	25.2	22.8	307	1284
Prosciutto Toscano DOP, sgrassato*	51.0	31.8	8.8	206	862

New nutritional analyses have highlighted – as already shown in previous publications – a **balance between the content of saturated and unsaturated fats** in deli meats, although their qualitative composition in the whole pieces products (Coppa, Pancetta, Prosciutto) changes according to the cut chosen for producing the product. These analyses confirm the important role that Italian deli meats could have in **providing the adequate amount of fatty acids within a balance diet**. These important data help to enhance deli meats as foods that, thanks to the addition of high-value nutrition, can be correctly inserted into a healthy and balanced diet.

	SATURATED FATTY ACIDS (% on fresh product)					
	C12:0	C14:0	C16:0	C17:0	C18:0	C20:0
Coppa Piacentina DOP	0.04	0.46	7.00	0.08	4.11	0.05
Pancetta Piacentina DOP	0.05	0.68	10.25	0.10	5.24	0.09
Salame Piacentino DOP	0.04	0.41	6.13	0.06	3.21	0.05
Salame Brianza DOP	0.03	0.39	6.03	0.07	3.26	0.05
Salame di Varzi DOP	0.03	0.41	6.30	0.07	3.13	0.05
Prosciutto Toscano DOP	0.04	0.35	4.56	0.05	1.93	0.04
Prosciutto Toscano DOP, sgrassato*	0.01	0.11	1.75	0.02	0.87	0.01

	MONOUNSATURATED FATTY ACIDS (% on fresh product)			
	C16:1	C17:1	C18:1	C20:1
Coppa Piacentina DOP	0.97	0.09	15.72	0.29
Pancetta Piacentina DOP	1.48	0.13	23.40	0.47
Salame Piacentino DOP	0.85	0.07	13.11	0.28
Salame Brianza DOP	0.86	0.09	14.73	0.30
Salame di Varzi DOP	0.86	0.08	13.69	0.27
Prosciutto Toscano DOP	0.68	0.06	10.10	0.24
Prosciutto Toscano DOP, sgrassato*	0.24	0.02	3.40	0.06

	POLYUNSATURATED FATTY ACIDS (% on fresh product)			
	C18:2	C18:3	C20:2	C20:4
Coppa Piacentina DOP	4.99	0.21	0.22	0.44
Pancetta Piacentina DOP	6.01	0.26	0.28	0.22
Salame Piacentino DOP	3.48	0.16	0.18	0.28
Salame Brianza DOP	4.64	0.19	0.20	0.41
Salame di Varzi DOP	3.94	0.15	0.18	0.34
Prosciutto Toscano DOP	3.05	0.15	0.16	0.29
Prosciutto Toscano DOP, sgrassato*	1.43	0.05	0.06	0.29

*sgrassato = visible fat removed

02.3 SALT AND OTHER PRESERVATIVES

Salt content ranges from 3,5/100g in Pancetta Piacentina to 4,7/100g in Prosciutto Toscano, in line with average values found in the previous study on Italian deli meats. Taking into account some factors, like portions, frequency of consumption and new data on compositions, it results, however, that **deli meats do not represent the main source of salt in the Italian diet**, represented by other products daily and mainly consumed (such as cereals products).

Aware of the international recommendations about the importance of limiting the consumption of salt, the Italian deli meat sector has been working for years to reduce its quantities in the products, in respect, anyway, of traditional recipes and typical characteristics and flavors. Also, thanks to the constant improvement of production and conservation methods, the use of nitrites and nitrates - whose function is to **preserve and guarantee food safety standards** - is now much more limited than

before. Research carried out in 2011 has proved that nitrates content in some deli meats has decreased to almost zero, whereas nitrites are now approximately absent. Nitrites and nitrates content in the six deli meats analyzed in this addendum are consistent with previous findings of 2011.

	ADDITIVES (salt, nitrites, nitrates) per 100 g		
	NaCl (g)	Nitrites (ppm)	Nitrates (ppm)
Coppa Piacentina DOP	4.3	abs	57,1
Pancetta Piacentina DOP	3.5	abs	59,4
Salame Piacentino DOP	4.0	abs	18,0
Salame Brianza DOP	3.7	abs	20,6
Salame di Varzi DOP	3.7	abs	5,7
Prosciutto Toscano DOP	4.7	abs	abs
Prosciutto Toscano DOP, sgrassato*	5.5	abs	abs

02.4 MICRONUTRIENTS: VITAMINS AND MINERALS

It has been observed that the content of **B Vitamins** in the analyzed deli meats is **particularly high**. Although they are required in small quantities, vitamins are **essential substances for human health**. Vitamins B1 and B2, for example, have specific functions within the energy metabolism; vitamin B6, instead, is involved as a coenzyme in nitrogen metabolism, influences expression of proteins and acts in hemoglobin synthesis, in carbohydrates and lipid metabolism.

	B VITAMINS AND VITAMIN E per 100 g					
	Thiamine (mg)	Riboflavin (mg)	Niacin (mg)	B6 (mg)	B12 (µg)	Vit. E (mg)
Coppa Piacentina DOP	0.53	0.20	7.33	0.14	0.63	0.23
Pancetta Piacentina DOP	0.21	0.06	1.84	0.07	0.25	0.31
Salame Piacentino DOP	0.41	0.19	6.11	0.11	0.52	0.09
Salame Brianza DOP	0.45	0.15	5.80	0.11	0.55	0.08
Salame di Varzi DOP	0.54	0.18	7.21	0.12	0.54	0.17
Prosciutto Toscano DOP	0.61	0.19	5.78	0.92	0.59	0.18
Prosciutto Toscano DOP, sgrassato*	0.72	0.21	6.63	1.10	0.68	0.14

As for all the other nutrients, the vitamin content in deli meats is expressed as the amount provided by a portion of product (50 g) compared with the Dietary Reference Values for the Italian Population (LARN 2014). Meat is generally considered as a good source of vitamin B; in particular, **pork meat is the main source of vitamin B1 in human diet**. Analyses prove an important content of vitamin B1 and B6: for instance, a portion of Prosciutto Toscano PDO (50 g) provides more than 30% of the dietary reference values of Vitamins B1 and B6; while, as for niacin, a portion of these deli meats provides almost 20% of daily requirements (LARN 2014).

*sgrassato = visible fat removed



Coppa Piacentina PDO and Salame di Varzi PDO are among the meat products with the **highest content of niacin**, that is a natural antioxidant present in muscle tissues, especially in those from red meat used to prepare the above-mentioned products. A portion of 50 g of these deli meats provides about one-fifth of the recommended daily intake of this vitamin.

Pork meat and its derivatives contain a considerable amount of **minerals**, such as iron, zinc, potassium and selenium which are present **in a bioavailable form** thanks to the chemical affinity between animal and human substrates. In particular, the amount of iron, zinc, potassium and selenium is quantitatively

satisfactory. For example, 50 g of the analyzed deli meats provide from 8% (Pancetta Piacentina PDO) to 22% (Coppa Piacentina PDO) of the recommended daily requirements of zinc.

The highest content of iron has been observed in Coppa Piacentina PDO and Salame Brianza PDO. Meat and its derivatives are the **main source of selenium in the Italian diet** (LARN 2014), that is why all the products analyzed give a high contribute to cover the needs of selenium. Even other minerals, such as magnesium, copper and phosphorus, from a nutritional point of view, could be content in interesting quantities.

	MACRONUTRIENTS per 100 g				
	Sodium (g)	Potassium (mg)	Magnesium (mg)	Calcium (mg)	Phosphorus (mg)
Coppa Piacentina DOP	1.7	552	36	24	282
Pancetta Piacentina DOP	1.4	244	14	7	118
Salame Piacentino DOP	1.6	522	33	15	264
Salame Brianza DOP	1.5	499	29	10	253
Salame di Varzi DOP	1.5	510	33	10	266
Prosciutto Toscano DOP	1.9	475	29	15	231
Prosciutto Toscano DOP, sgrassato*	2.2	536	32	17	260

	MICRONUTRIENTS per 100 g				
	Iron (mg)	Zinc (mg)	Copper (mg)	Manganese (mg)	Selenium (mg)
Coppa Piacentina DOP	1.84	4.53	0.12	0.05	0.04
Pancetta Piacentina DOP	0.51	1.68	0.05	0.01	0.01
Salame Piacentino DOP	1.18	3.94	0.10	0.16	0.03
Salame Brianza DOP	1.49	3.56	0.10	0.06	0.02
Salame di Varzi DOP	1.34	3.79	0.09	0.07	0.03
Prosciutto Toscano DOP	1.05	2.79	0.08	0.02	0.02
Prosciutto Toscano DOP, sgrassato*	1.21	3.19	0.09	0.02	0.03

*sgrassato = visible fat removed



03 - CONCLUSIONS

03.1 ITALIAN DELI MEATS WITHIN A BALANCED DIET

Deli meats are an integral part of Italian cuisine. Thanks to the improvement of their nutritional value, highlighted also in this document, deli meats meet the needs of consumers not only for their particular taste but also for their demand of quality foods that can be introduced in a healthy and balanced diet. Thanks to their unique features, these foods are suitable for all age groups and can be consumed on several occasions, because of their culinary versatility, for the fact that they are easy to prepare and conserve and, last but not least, because their natural conviviality.

During **childhood** and **adolescence**, when important physiological changes occur, the body requires high levels of energy and nutrients, in particular **proteins, iron, calcium and vitamins**. During this delicate phase of growth, several deli meats may be recommended, provided that such foods are part of a varied and balanced diet and are introduced respecting the correct portion sizes and frequency of consumption. It is a valid recommendation even for children and young people with weight-related problems: for these, low-fat deli meats would be preferred.

To give an example, a **small sandwich with a portion of deli meat plus vegetable and/or fruit, represents a nutritious snack for kids**, because, compared to other foods usually consumed during snack hours, it contains a higher amount of proteins, minerals and vitamins.

Deli meats also meet the nutritional needs of the elderly. The progressive lengthening of human life

expectancy means it is increasingly necessary to provide foods with a **limited amount of calories but, at the same time, capable of supplying nutrients and other factors necessary for synthesis**. Also particularly relevant for the elderly is that these products are highly available, easy to choose, buy and prepare. The progressive nutritional improvement and the **richness of these foods in protein and micronutrients**, as well as the organoleptic factors, the easiness of chewing, together with the shelf life make Italian deli meats appropriate and good sources of many nutrients for this age group.

In such a scenario, where growing attention is paid to healthy lifestyles, it is also necessary to focus on **athletes and sports-minded people**. The **energy requirements of those who regularly practice sport tend to be higher** than those of sedentary population, due to energy expenditure for intense physical activity. The nutritional intake of this population should therefore satisfy the following needs: **the constant requirement of energy reserves, the improvement of the cardiorespiratory capacity, the development of muscles, the maintaining of a good level of hydration and hydro electrolytic equilibrium**. In such a framework, deli meats, combined with sources of carbohydrates, can represent a good and practical answer.

In conclusion, spreading scientific knowledge through updated nutritional values and publications is important to support both experts, who deal with health and nutrition, and consumers, who demand more and more high-quality food products.

04 - APPENDIX

CHEMICAL COMPOSITION AND ENERGETIC VALUE PER 100g

ITALIAN DELI MEATS	Water	Proteins	Lipids	Cholesterol	Carbohydrates	Energy		NaCl
	g	g	g	mg	g	kcal	kJ	g
Bresaola della Valtellina IGP	59,3	33,1	2,0	63,0	0,4	151	634	4,0
Ciccioli	2,5	45,2	50,6	90,0	0,0	636	2662	1,6
Coppa	34,7	28,9	31,6	127,0	0,0	401	1676	4,9
Coppa Piacentina DOP	29,1	28,6	36,4	114,2	1,2	447	1870	4,3
Cotechino Modena IGP, cotto ¹	54,4	23,6	16,3	86,0	3,2	253	1058	2,2
Mortadella Bologna IGP	56,9	15,7	25,0	72,0	0,0	288	1206	2,4
Pancetta arrotolata ⁴	30,0	15,1	52,2	68,0	0,0	530	2217	3,0
Pancetta Piacentina DOP	29,3	14,5	51,1	87,9	0,89	521	2180	3,5
Prosciutto cotto	72,2	15,7	7,6	48,6	1,7	138	576	2,1
Prosciutto cotto, sgrassato ²	74,7	17,0	3,5	42,0	1,9	107	446	2,1
Prosciutto cotto scelto	70,0	17,5	9,2	57,1	0,6	155	649	1,9
Prosciutto cotto scelto, sgrassato ²	73,3	19,4	4,0	49,0	0,5	115	483	2,0
Prosciutto cotto, alta qualità	66,8	18,0	11,9	50,3	0,8	182	761	1,9
Prosciutto cotto, alta qualità, sgrassato ²	71,8	19,5	5,0	59,0	0,9	127	531	2,0
Prosciutto crudo nazionale	50,5	27,8	13,7	75,0	0,1	235	985	6,0
Prosciutto crudo nazionale sgrassato ²	56,1	30,5	5,1	87,0	0,3	169	707	6,9
Prosciutto di Modena DOP	45,6	25,6	22,9	62,0	0,1	309	1293	5,1
Prosciutto di Modena DOP, sgrassato ²	53,8	30,2	8,9	75,0	0,1	201	842	6,0
Prosciutto di San Daniele DOP	50,2	25,7	18,6	83,0	0,2	271	1135	4,5
Prosciutto di San Daniele DOP, sgrassato ²	58,0	29,0	6,5	91,0	0,4	176	737	5,1
Prosciutto Toscano DOP	43,5	25,2	22,8	99,0	0,3	307	1284	4,7
Prosciutto Toscano DOP, sgrassato	51,0	31,8	8,8	95,0	0,4	206	862	5,5
Salame Brianza DOP	32,8	31,1	32,8	106	0,90	423	1770	3,7
Salame Milano	37,7	25,4	31,0	104,0	1,1	384	1608	3,9
Salame Napoli	37,3	27,4	29,7	91,0	0,2	378	1580	4,1
Salame Piacentino DOP	35,5	31,9	29,8	104	0,92	398	1665	4,0
Salame ungherese	34,6	23,6	35,7	92,0	1,1	420	1756	4,0
Salame di Varzi DOP	34,2	31,0	31,0	100	0,98	412	1724	3,7
Salamini Italiani alla Cacciatora DOP	33,1	28,4	32,7	94,0	0,7	411	1720	4,2
Speck Alto Adige IGP	43,6	30,7	19,1	90,6	1,2	300	1254	4,1
Strutto	0,0	0,0	100,0	108,0	0,0	900	3766	0,1
Wurstel di puro suino	61,7	13,2	21,1	81,0	1,9	250	1046	2,2
Wurstel di puro suino, cotto ³	60,3	14,6	22,2	84,0	0,3	259	1083	2,3
Zampone Modena IGP, cotto ¹	54,1	23,7	17,4	106,0	2,6	262	1094	1,7

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04.1 UPDATED NUTRITIONAL TABLES OF ITALIAN DELI MEATS

MINERALS: MICROELEMENTS PER 100g

ITALIAN DELI MEATS	Iron	Zinc	Copper	Manganese	Selenium
	mg	mg	mg	mg	µg
Bresaola della Valtellina IGP	2,63	4,51	0,07	0,02	7
Ciccioli	1,15	1,44	0,12	0,03	32
Coppa	1,33	3,70	0,10	0,03	12
Coppa Piacentina DOP	1,84	4,53	0,12	0,05	40
Cotechino Modena IGP, cotto ¹	1,44	1,63	tr	0,01	12
Mortadella Bologna IGP	1,03	1,57	tr	0,01	20
Pancetta arrotolata ⁴	0,35	1,28	0,05	0,01	11
Pancetta Piacentina DOP	0,51	1,68	0,05	0,01	10
Prosciutto cotto	0,49	1,10	0,08	0,01	10
Prosciutto cotto, sgrassato ²	0,52	1,15	0,08	0,01	10
Prosciutto cotto scelto	0,57	1,28	0,07	0,01	11
Prosciutto cotto scelto, sgrassato ²	0,60	1,35	0,08	0,01	12
Prosciutto cotto, alta qualità	0,67	1,45	0,09	0,01	11
Prosciutto cotto, alta qualità, sgrassato ²	0,72	1,57	0,10	0,01	12
Prosciutto crudo nazionale	0,83	2,08	0,05	0,01	15
Prosciutto crudo nazionale sgrassato ²	0,91	2,29	0,05	0,01	16
Prosciutto di Modena DOP	1,05	2,72	0,06	0,01	17
Prosciutto di Modena DOP, sgrassato ²	1,24	3,22	0,07	0,02	20
Prosciutto di San Daniele DOP	0,92	2,38	0,04	0,01	14
Prosciutto di San Daniele DOP, sgrassato ²	1,06	2,73	0,05	0,01	13
Prosciutto Toscano DOP	1,05	2,79	0,08	0,02	20
Prosciutto Toscano DOP, sgrassato	1,21	3,19	0,09	0,02	30
Salame Brianza DOP	1,49	3,56	0,10	0,06	20
Salame Milano	1,20	3,04	0,13	0,02	18
Salame Napoli	0,88	2,47	0,11	0,04	17
Salame Piacentino DOP	1,18	3,94	0,10	0,16	30
Salame ungherese	1,08	2,72	0,12	0,02	16
Salame di Varzi DOP	1,34	3,79	0,09	0,07	30
Salamini Italiani alla Cacciatora DOP	1,02	2,54	tr	0,01	14
Speck Alto Adige IGP	1,42	2,46	0,07	0,04	15
Strutto	tr	0,08	0,02	0,00	tr
Wurstel di puro suino	1,00	1,15	0,06	0,01	10
Wurstel di puro suino, cotto ³	0,86	0,92	0,04	0,01	7
Zampone Modena IGP, cotto ¹	1,28	1,50	tr	0,01	12

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MINERALS: MACROELEMENTS PER 100g

ITALIAN DELI MEATS	Potassium	Magnesium	Calcium	Phosphorus
	mg	mg	mg	mg
Bresaola della Valtellina IGP	630	26	6	269
Ciccioli	425	16	12	164
Coppa	685	27	7	231
Coppa Piacentina DOP	552	36	24	282
Cotechino Modena IGP, cotto ¹	220	9	14	91
Mortadella Bologna IGP	314	13	8	119
Pancetta arrotolata ⁴	369	12	3	118
Pancetta Piacentina DOP	244	14	7	118
Prosciutto cotto	311	12	6	126
Prosciutto cotto, sgrassato ²	325	13	7	132
Prosciutto cotto scelto	321	13	5	136
Prosciutto cotto scelto, sgrassato ²	339	14	5	143
Prosciutto cotto, alta qualità	316	13	5	142
Prosciutto cotto, alta qualità, sgrassato ²	341	14	5	153
Prosciutto crudo nazionale	621	22	10	196
Prosciutto crudo nazionale sgrassato ²	683	24	11	216
Prosciutto di Modena DOP	612	24	10	206
Prosciutto di Modena DOP, sgrassato ²	723	28	12	244
Prosciutto di San Daniele DOP	581	20	9	184
Prosciutto di San Daniele DOP, sgrassato ²	667	23	10	211
Prosciutto Toscano DOP	475	29	15	231
Prosciutto Toscano DOP, sgrassato	536	32	17	260
Salame Brianza DOP	499	29	10	253
Salame Milano	657	21	19	204
Salame Napoli	667	22	12	208
Salame Piacentino DOP	522	33	15	264
Salame ungherese	637	17	26	186
Salame di Varzi DOP	510	33	10	266
Salamini Italiani alla Cacciatora DOP	694	21	8	204
Speck Alto Adige IGP	658	27	8	272
Strutto	tr	tr	tr	tr
Wurstel di puro suino	260	10	21	107
Wurstel di puro suino, cotto ³	223	9	17	77
Zampone Modena IGP, cotto ¹	132	7	12	68

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04.1 UPDATED NUTRITIONAL TABLES OF ITALIAN DELI MEATS

VITAMINS PER 100g

ITALIAN DELI MEATS	Thiamine (Vit. B1)	Riboflavin (Vit. B2)	Niacin (Vit. B3)	Vit. B6	Vit. B12	Vit. E
	mg	mg	mg	mg	µg	mg
Bresaola della Valtellina IGP	0,41	0,13	2,74	0,52	0,77	0,14
Ciccioli	0,00	0,00	0,00	0,00	0,00	0,16
Coppa	0,61	0,18	6,02	0,14	0,68	0,16
Coppa Piacentina DOP	0,53	0,20	7,33	0,14	0,63	0,23
Cotechino Modena IGP, cotto ¹	0,09	0,09	2,68	0,06	0,52	0,28
Mortadella Bologna IGP	0,24	0,12	4,19	0,27	0,28	0,28
Pancetta arrotolata ⁴	0,36	0,06	2,85	0,06	0,51	0,27
Pancetta Piacentina DOP	0,21	0,06	1,84	0,07	0,25	0,31
Prosciutto cotto	0,67	0,12	4,40	0,37	0,09	0,09
Prosciutto cotto, sgrassato ²	0,70	0,13	4,60	0,39	0,09	0,18
Prosciutto cotto scelto	0,54	0,13	4,70	0,43	0,13	0,13
Prosciutto cotto scelto, sgrassato ²	0,57	0,14	4,97	0,45	0,13	0,19
Prosciutto cotto, alta qualità	0,69	0,14	4,70	0,44	0,13	0,13
Prosciutto cotto, alta qualità, sgrassato ²	0,74	0,15	5,07	0,47	0,14	0,16
Prosciutto crudo nazionale	0,58	0,19	5,45	1,00	0,38	0,11
Prosciutto crudo nazionale sgrassato ²	0,64	0,21	5,99	1,10	0,42	0,21
Prosciutto di Modena DOP	0,59	0,20	5,57	1,00	0,33	0,11
Prosciutto di Modena DOP, sgrassato ²	0,70	0,24	6,58	1,18	0,39	0,16
Prosciutto di San Daniele DOP	0,68	0,20	5,13	1,04	0,47	0,13
Prosciutto di San Daniele DOP, sgrassato ²	0,78	0,23	5,89	1,19	0,54	0,15
Prosciutto Toscano DOP	0,61	0,19	5,78	0,92	0,59	0,18
Prosciutto Toscano DOP, sgrassato	0,72	0,21	6,63	1,10	0,68	0,14
Salame Brianza DOP	0,45	0,15	5,80	0,11	0,55	0,08
Salame Milano	0,53	0,17	4,97	0,16	0,56	0,08
Salame Napoli	0,51	0,14	5,22	0,14	0,44	0,11
Salame Piacentino DOP	0,41	0,19	6,11	0,11	0,52	0,09
Salame ungherese	0,46	0,17	3,80	0,13	0,52	0,09
Salame di Varzi DOP	0,54	0,18	7,21	0,12	0,54	0,17
Salamini Italiani alla Cacciatora DOP	0,50	0,14	7,73	0,87	0,52	0,09
Speck Alto Adige IGP	0,41	0,16	4,10	0,47	0,33	0,11
Strutto	0,00	0,00	0,00	0,00	0,00	0,66
Wurstel di puro suino	0,21	0,08	1,61	0,05		0,17
Wurstel di puro suino, cotto ³	0,24	0,05	1,82	0,06		0,17
Zampone Modena IGP, cotto ¹	0,06	0,08	2,58	0,03	0,46	0,25

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04.1 UPDATED NUTRITIONAL TABLES OF ITALIAN DELI MEATS

SATURATED FATTY ACIDS PER 100g

ITALIAN DELI MEATS	C4:0-C10:0	C12:0	C14:0	C15:0	C16:0	C17:0	C18:0	C20:0	C22:0	Total Saturates
Bresaola della Valtellina IGP	0,00	0,00	0,03		0,39	0,02	0,28	0,00	0,00	0,72
Ciccioli	0,05	0,05	0,75	0,03	11,17	0,13	5,85	0,08		18,10
Coppa	0,04	0,03	0,44	0,01	7,16	0,07	4,04	0,04		11,84
Coppa Piacentina DOP		0,04	0,46		7,00	0,08	4,11	0,05	0,00	11,74
Cotechino Modena IGP, cotto ¹	0,02	0,01	0,20	0,02	3,21	0,02	1,60	0,01		5,09
Mortadella Bologna IGP	0,02	0,03	0,39	0,02	5,01	0,09	2,68	0,02		8,26
Pancetta arrotolata ⁴	0,05	0,05	0,76	0,02	10,64	0,10	5,40	0,08		17,11
Pancetta Piacentina DOP		0,05	0,68		10,25	0,10	5,24	0,09	0,00	16,41
Prosciutto cotto	0,07	0,01	0,12		1,97	0,03	0,98	0,01	0,00	3,20
Prosciutto cotto, sgrassato ²	0,03	0,01	0,05		0,86	0,01	0,43	0,01	0,00	1,41
Prosciutto cotto scelto	0,08	0,02	0,16		2,43	0,04	1,25	0,01	0,00	3,99
Prosciutto cotto scelto, sgrassato ²	0,03	0,01	0,07		1,01	0,01	0,52	0,01	0,00	1,66
Prosciutto cotto, alta qualità	0,08	0,02	0,19		2,86	0,03	1,45	0,02	0,00	4,65
Prosciutto cotto, alta qualità, sgrassato ²	0,03	0,01	0,08		1,15	0,01	0,58	0,01	0,00	1,87
Prosciutto crudo nazionale	0,03	0,02	0,22		3,10	0,03	1,41	0,02	0,00	4,84
Prosciutto crudo nazionale sgrassato ²	0,01	0,01	0,08		1,10	0,01	0,50	0,01	0,00	1,72
Prosciutto di Modena DOP	0,05	0,03	0,37		5,10	0,05	2,29	0,03	0,00	7,92
Prosciutto di Modena DOP, sgrassato ²	0,02	0,01	0,14		1,89	0,02	0,85	0,01	0,00	2,94
Prosciutto di San Daniele DOP	0,03	0,02	0,30		4,12	0,04	1,93	0,03	0,00	6,47
Prosciutto di San Daniele DOP, sgrassato ²	0,01	0,01	0,10		1,38	0,01	0,64	0,01	0,00	2,16
Prosciutto Toscano DOP		0,04	0,35		4,56	0,05	1,93	0,04	0,00	6,97
Prosciutto Toscano DOP, sgrassato		0,01	0,11		1,75	0,02	0,87	0,01	0,00	2,77
Salame Brianza DOP		0,03	0,39		6,03	0,07	3,26	0,05	0,00	9,83
Salame Milano	0,04	0,04	0,48	0,02	6,95	0,08	3,35	0,05		10,99
Salame Napoli	0,04	0,04	0,45	0,02	6,71	0,08	3,30	0,04		10,67
Salame Piacentino DOP		0,04	0,41		6,13	0,06	3,21	0,05	0,00	9,9
Salame ungherese	0,04	0,04	0,55	0,02	7,68	0,09	3,70	0,05		12,19
Salame di Varzi DOP		0,03	0,41		6,30	0,07	3,13	0,05	0,00	9,99
Salamini Italiani alla Cacciatora DOP	0,03	0,04	0,31	0,05	6,72	0,08	3,66	0,04		10,93
Speck Alto Adige IGP	0,03	0,06	0,37		4,07	0,06	2,00	0,02	0,00	6,62
Strutto	0,11	0,11	1,46	0,03	22,21	0,25	12,25	0,11		36,53
Wurstel di puro suino	0,02	0,02	0,31	0,01	4,83	0,06	2,54	0,03		7,83
Wurstel di puro suino, cotto ³	0,02	0,03	0,29	0,01	4,47	0,06	2,50	0,03		7,42
Zampone Modena IGP, cotto ¹	0,02	0,02	0,23	0,02	3,43	0,04	1,69	0,01		5,45

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04.1 UPDATED NUTRITIONAL TABLES OF ITALIAN DELI MEATS

MONOUNSATURATED FATTY ACIDS PER 100g

ITALIAN DELI MEATS	C14:1	C16:1	C17:1	C18:1	C20:1	C22:1	Total Monounsaturated
Bresaola della Valtellina IGP	0,01	0,05	0,02	0,61	0,00	0,00	0,69
Ciccioli		1,42	0,15	22,10	0,39		24,07
Coppa		0,84	0,07	13,40	0,24		14,55
Coppa Piacentina DOP	0,00	0,97	0,09	15,72	0,29	0,00	17,07
Cotechino Modena IGP, cotto ¹		0,50	0,05	7,48	0,12		8,15
Mortadella Bologna IGP		0,70	0,09	11,05	0,23		12,06
Pancetta arrotolata ⁴		1,47	0,14	23,57	0,46		25,65
Pancetta Piacentina DOP	0,00	1,48	0,13	23,40	0,47	0,00	25,48
Prosciutto cotto	0,00	0,22	0,03	3,21	0,05	0,00	3,52
Prosciutto cotto, sgrassato ²	0,00	0,10	0,01	1,41	0,02	0,00	1,55
Prosciutto cotto scelto	0,00	0,27	0,03	3,84	0,06	0,00	4,21
Prosciutto cotto scelto, sgrassato ²	0,00	0,11	0,01	1,59	0,03	0,00	1,75
Prosciutto cotto, alta qualità	0,00	0,32	0,03	5,00	0,08	0,00	5,43
Prosciutto cotto, alta qualità, sgrassato ²	0,00	0,13	0,01	2,01	0,03	0,00	2,18
Prosciutto crudo nazionale	0,00	0,39	0,04	5,81	0,11	0,00	6,35
Prosciutto crudo nazionale sgrassato ²	0,00	0,14	0,01	2,06	0,04	0,00	2,26
Prosciutto di Modena DOP	0,01	0,66	0,06	9,83	0,21	0,01	10,77
Prosciutto di Modena DOP, sgrassato ²	0,00	0,25	0,02	3,65	0,08	0,00	4,00
Prosciutto di San Daniele DOP	0,00	0,51	0,04	7,86	0,16	0,00	8,58
Prosciutto di San Daniele DOP, sgrassato ²	0,00	0,17	0,01	2,62	0,05	0,00	2,86
Prosciutto Toscano DOP	0,00	0,68	0,06	10,10	0,24	0,00	11,08
Prosciutto Toscano DOP, sgrassato	0,00	0,24	0,02	3,40	0,06	0,00	3,72
Salame Brianza DOP	0,00	0,86	0,09	14,73	0,30	0,00	15,98
Salame Milano		0,94	0,10	13,94	0,26		15,24
Salame Napoli		0,88	0,09	13,49	0,25		14,71
Salame Piacentino DOP	0,00	0,85	0,07	13,11	0,28	0,00	14,31
Salame ungherese		1,03	0,11	16,02	0,30		17,46
Salame di Varzi DOP	0,00	0,86	0,08	13,69	0,27	0,00	14,9
Salamini Italiani alla Cacciatora DOP		0,92	0,11	14,34	0,27		15,64
Speck Alto Adige IGP	0,01	0,54	0,07	7,60	0,14	0,00	8,36
Strutto		2,60	0,26	42,32	0,78		45,96
Wurstel di puro suino		0,63	0,07	9,36	0,17		10,22
Wurstel di puro suino, cotto ³		0,57	0,07	8,75	0,16		9,56
Zampone Modena IGP, cotto ¹		0,56	0,04	8,08	0,11		8,78

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POLIUNSATURATED FATTY ACIDS PER 100g

ITALIAN DELI MEATS	C18:2	C18:3	C20:2	C20:3	C20:4	C20:5	C22:6	Total Polyunsaturated
Bresaola della Valtellina IGP	0,21	0,05			0,09	0,04	0,01	0,40
Ciccioli	5,39	0,24	0,22	0,05	0,18			6,08
Coppa	3,31	0,14	0,13	0,03	0,14			3,75
Coppa Piacentina DOP	4,99	0,21	0,22		0,44		0,00	5,86
Cotechino Modena IGP, cotto ¹	1,98	0,09	0,06	0,01	0,13			2,27
Mortadella Bologna IGP	3,06	0,16	0,14	0,00	0,11			3,47
Pancetta arrotolata ⁴	6,16	0,28	0,29	0,06	0,17			6,96
Pancetta Piacentina DOP	6,01	0,26	0,28		0,22		0,00	6,77
Prosciutto cotto	0,44	0,03			0,01	0,01	0,00	0,49
Prosciutto cotto, sgrassato ²	0,19	0,01			0,00	0,00	0,00	0,20
Prosciutto cotto scelto	0,48	0,04			0,01	0,01	0,00	0,54
Prosciutto cotto scelto, sgrassato ²	0,20	0,02			0,00	0,00	0,00	0,22
Prosciutto cotto, alta qualità	1,09	0,07			0,06	0,02	0,00	1,24
Prosciutto cotto, alta qualità, sgrassato ²	0,44	0,03			0,02	0,01	0,00	0,50
Prosciutto crudo nazionale	1,60	0,12			0,14	0,01	0,01	1,88
Prosciutto crudo nazionale sgrassato ²	0,57	0,04			0,05	0,00	0,00	0,66
Prosciutto di Modena DOP	2,78	0,14			0,20	0,02	0,01	3,15
Prosciutto di Modena DOP, sgrassato ²	1,03	0,05			0,07	0,01	0,00	1,16
Prosciutto di San Daniele DOP	2,36	0,11			0,19	0,01	0,01	2,68
Prosciutto di San Daniele DOP, sgrassato ²	0,79	0,04			0,06	0,00	0,00	0,89
Prosciutto Toscano DOP	3,05	0,15	0,16		0,29		0,00	3,65
Prosciutto Toscano DOP, sgrassato	1,43	0,05	0,06		0,29		0,00	1,83
Salame Brianza DOP	4,64	0,19	0,20		0,41		0,00	5,44
Salame Milano	2,98	0,10	0,14	0,02	0,05			3,29
Salame Napoli	3,67	0,17	0,15	0,03	0,12			4,14
Salame Piacentino DOP	3,48	0,16	0,18		0,28		0,00	4,10
Salame ungherese	3,90	0,16	0,15	0,02	0,09			4,32
Salame di Varzi DOP	3,94	0,15	0,18		0,34		0,00	4,61
Salamini Italiani alla Cacciatora DOP	3,93	0,18	0,16	0,01	0,16			4,44
Speck Alto Adige IGP	2,74	0,23			0,26	0,02	0,01	3,26
Strutto	11,48	0,60	0,45	0,07	0,17			12,77
Wurstel di puro suino	2,66	0,15	0,10	0,02	0,11			3,04
Wurstel di puro suino, cotto ³	2,70	0,17	0,10	0,03	0,16			3,16
Zampone Modena IGP, cotto ¹	2,09	0,10	0,04	0,02	0,15			2,40

¹Cotto = cooked. After 20 mins. cooking, inside the packaging and drained of the cooking liquid.

²Sgrassato = visible fat removed. Values referring to the product without visible fat.

³Cotto = cooked. Stir-fried without the addition of fats and salt.

⁴Arrotolata = rolled up

New nutritional values emerged from the present study are highlighted in bold.

All the other values refer to 2011 nutrition tables.

CURRENT LIPID COMPOSITION OF ITALIAN DELI MEATS

ITALIAN DELI MEATS	Saturated Fats	Unsaturated Fats
Bresaola della Valtellina IGP	37%	63%
Coppa	39%	61%
Coppa Piacentina DOP	34%	66%
Cotechino Modena IGP, cotto ¹	33%	67%
Mortadella Bologna IGP	35%	65%
Pancetta arrotolata	35%	65%
Pancetta Piacentina DOP	34%	66%
Prosciutto cotto	41-46%	54-59%
Prosciutto cotto, sgrassato ²	41-46%	54-59%
Prosciutto crudo nazionale	37%	63%
Prosciutto crudo nazionale sgrassato ²	37%	63%
Prosciutto di Modena DOP	36%	64%
Prosciutto di Modena DOP, sgrassato ²	36%	64%
Prosciutto di San Daniele DOP	36%	64%
Prosciutto di San Daniele DOP, sgrassato ²	36%	64%
Prosciutto Toscano DOP	32%	68%
Salame Brianza DOP	32%	68%
Salame Milano	37%	63%
Salame Napoli	36%	64%
Salame Piacentino DOP	35%	65%
Salame ungherese	36%	64%
Salame di Varzi DOP	34%	66%
Salamini Italiani alla Cacciatora DOP	35%	65%
Speck Alto Adige IGP	36%	64%
Wurstel di puro suino	37%	63%
Zampone Modena IGP, cotto ¹	33%	67%

¹Cotto = cooked. After 20 mins. cooking, inside the packaging and drained of the cooking liquid.

²Sgrassato = visible fat removed. Values referring to the product without visible fat.

³Arrotolata = rolled up

New nutritional values emerged from the present study are highlighted in bold.

All the other values refer to 2011 nutrition tables.

NITRITES AND NITRATES

ITALIAN DELI MEATS	Nitrites	Nitrates
	ppm	ppm
Bresaola della Valtellina IGP	2,4	30,2
Ciccioli	abs	18,0
Coppa	abs	11,0
Coppa Piacentina DOP	abs	57,1
Cotechino Modena IGP, cotto ¹	abs	5,0
Mortadella Bologna IGP	abs	11,0
Pancetta arrotolata ⁴	abs	21,0
Pancetta Piacentina DOP	abs	59,4
Prosciutto cotto	8,1	14,4
Prosciutto cotto, sgrassato	8,0	15,0
Prosciutto cotto scelto	4,6	5,5
Prosciutto cotto scelto, sgrassato ²	5,0	6,0
Prosciutto cotto, alta qualità	4,7	13,6
Prosciutto cotto, alta qualità, sgrassato ²	5,0	15,0
Prosciutto crudo nazionale	abs	abs
Prosciutto crudo nazionale sgrassato ²	abs	abs
Prosciutto di Modena DOP	abs	abs
Prosciutto di Modena DOP, sgrassato ²	abs	abs
Prosciutto di San Daniele DOP	abs	abs
Prosciutto di San Daniele DOP, sgrassato ²	abs	abs
Prosciutto Toscano DOP	abs	abs
Prosciutto Toscano DOP, sgrassato	abs	abs
Salame Brianza DOP	abs	20,6
Salame Milano	abs	14,0
Salame Napoli	abs	29,0
Salame Piacentino DOP	abs	18,0
Salame ungherese	abs	19,0
Salame di Varzi DOP	abs	5,7
Salamini Italiani alla Cacciatora DOP	abs	16,0
Speck Alto Adige IGP	1,2	23,3
Strutto	abs	abs
Wurstel di puro suino	abs	13,0
Wurstel di puro suino, cotto ³	2,0	17,0
Zampone Modena IGP, cotto ¹	abs	4,0

¹Cotto = cooked. After 20 mins. cooking, inside the packaging and drained of the cooking liquid.

²Sgrassato = visible fat removed. Values referring to the product without visible fat.

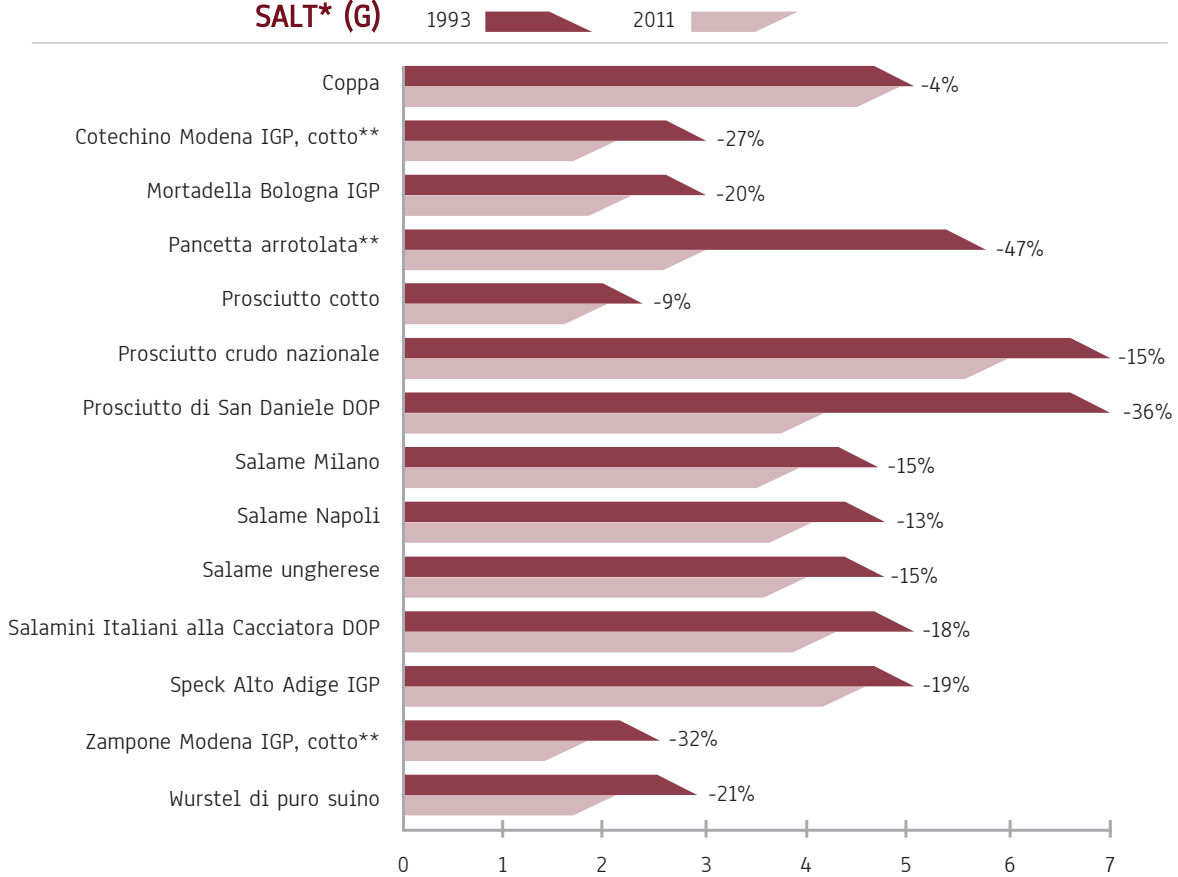
³Cotto = cooked. Stir-fried without the addition of fats and salt.

⁴Arrotolata = rolled up

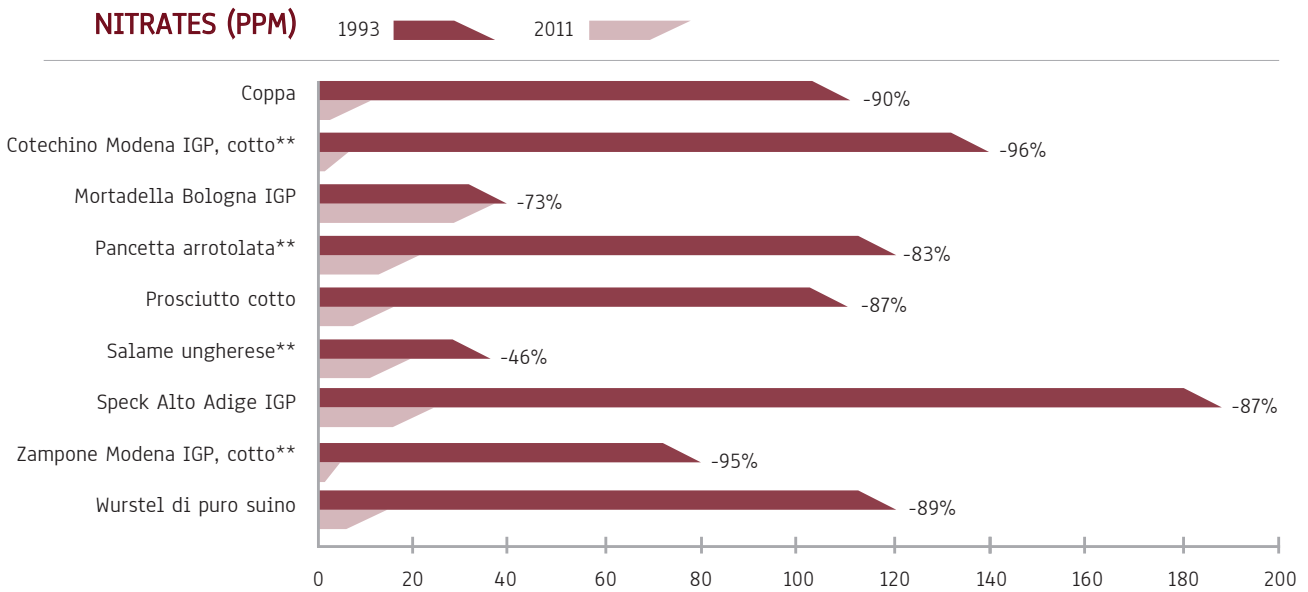
New nutritional values emerged from the present study are highlighted in bold.
All the other value refer to 2011 nutrition tables.

04.2 NUTRITIONAL IMPROVEMENT FROM 1993

SALT* (G)



NITRATES (PPM)

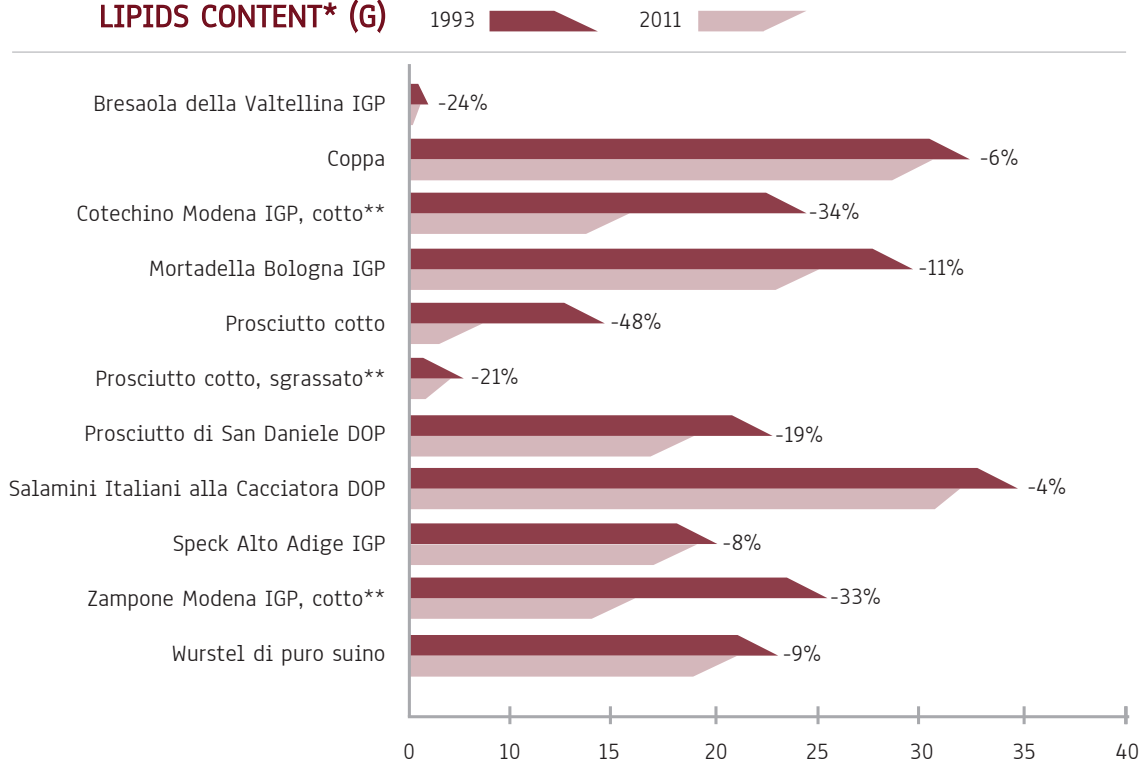


* Per 100 g of product

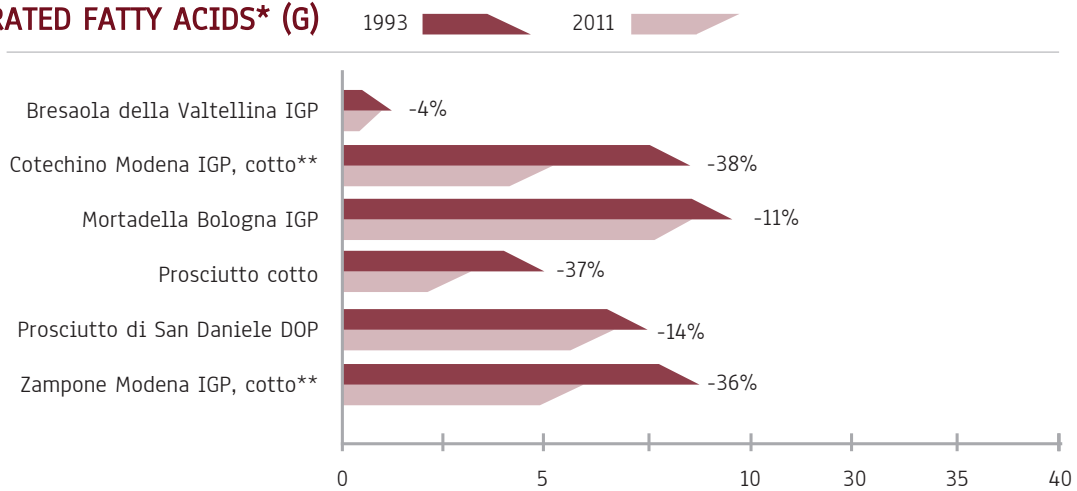
NOTE: for products chosen for 2017 new nutritional analyses, 1993 reference values are not available.

** cotto = cooked, arrotolata=rolled up, sgrassato=visible fat removed.

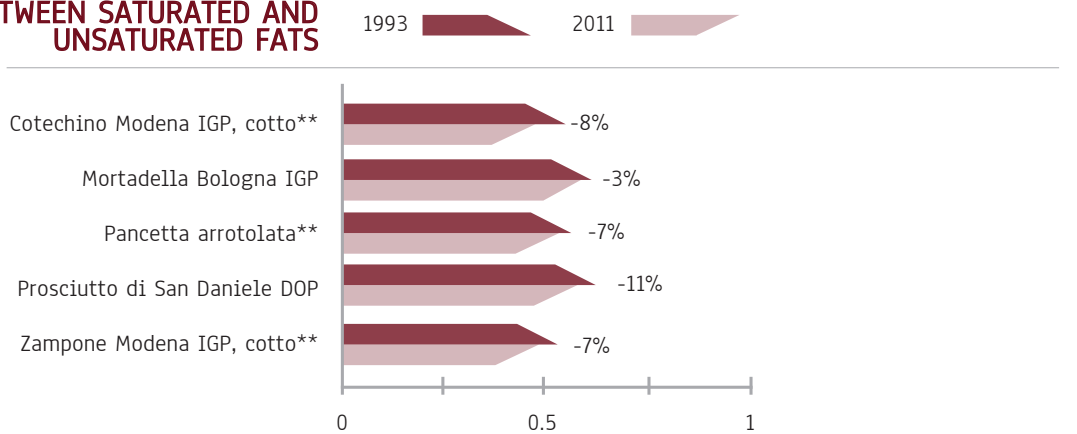
LIPIDS CONTENT* (G)



SATURATED FATTY ACIDS* (G)



RATIO BETWEEN SATURATED AND UNSATURATED FATS

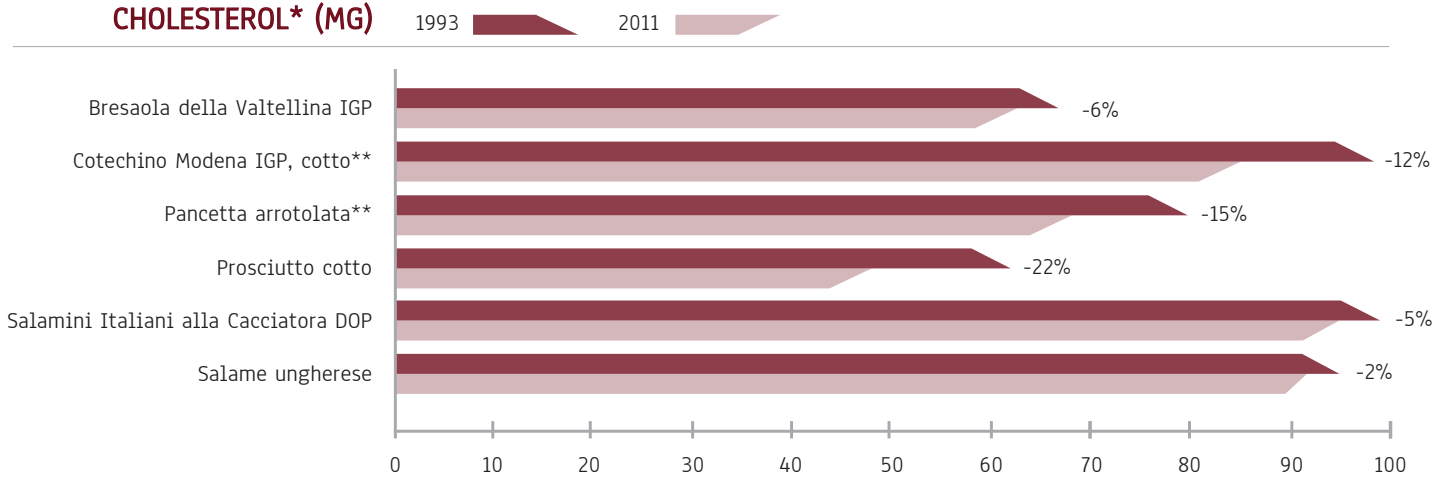


* Per 100 g of product

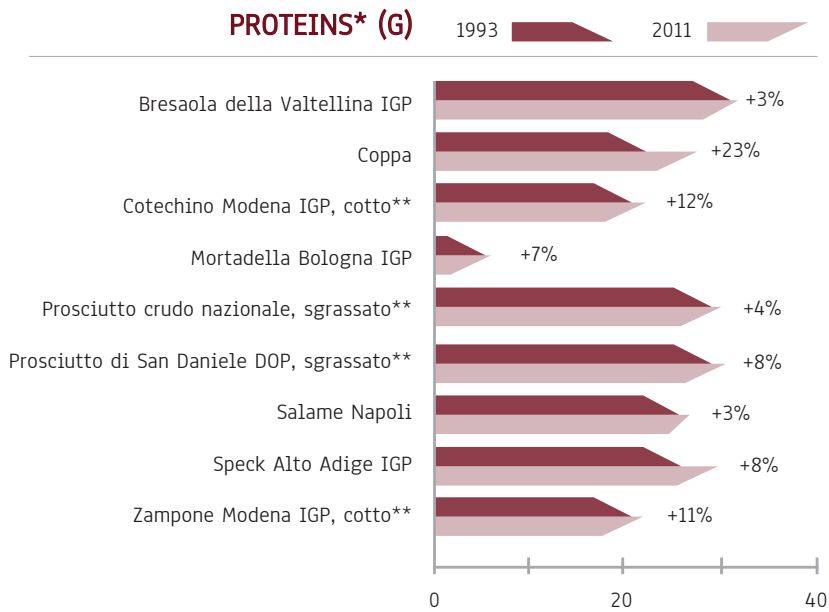
NOTE: for products chosen for 2017 new nutritional analyses, 1993 reference values are not available.

** cotto = cooked, arrotolata=rolled up, sgrassato=visible fat removed.

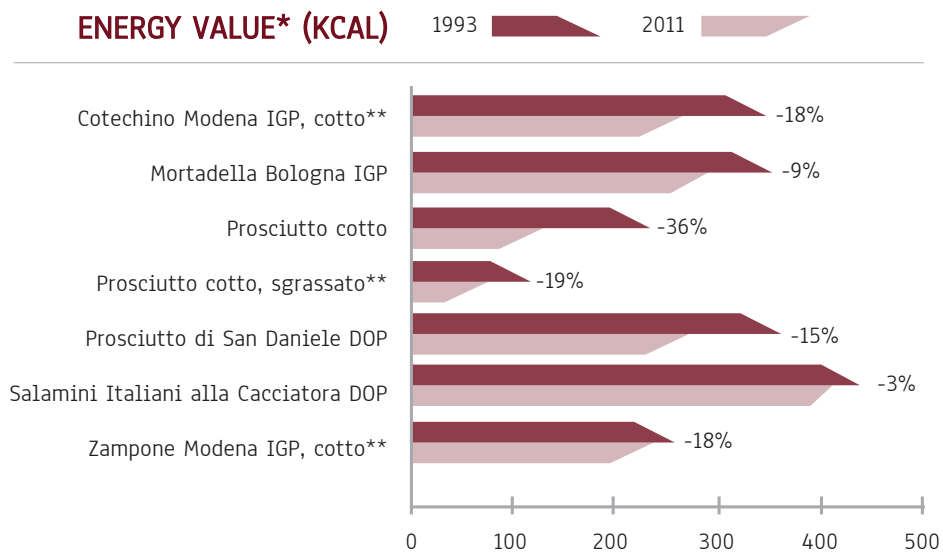
CHOLESTEROL* (MG)



PROTEINS* (G)



ENERGY VALUE* (KCAL)



* Per 100 g of product

NOTE: for products chosen for 2017 new nutritional analyses, 1993 reference values are not available.

** cotto = cooked, arrotolata=rolled up, sgrassato=visible fat removed.

LINOLEIC ACID (LA) AND ALPHA-LINOLEIC ACID (ALA)

ITALIAN DELI MEATS	LA (Omega-6)	ALA (Omega-3)
	% RI*	
Bresaola della Valtellina IGP	1,1%	2,1%
Coppa	16,8%	5,7%
Coppa Piacentina DOP	25,3%	8,5%
Cotechino Modena IGP, cotto ¹	10,1%	3,8%
Mortadella Bologna IGP	15,6%	6,6%
Pancetta arrotolata ³	31,3%	11,3%
Pancetta Piacentina DOP	30,5%	10,5%
Prosciutto cotto	2,2%	1,2%
Prosciutto cotto, alta qualità	5,5%	2,7%
Prosciutto cotto, alta qualità, sgrassato ²	2,2%	1,1%
Prosciutto cotto scelto	2,4%	1,5%
Prosciutto cotto scelto, sgrassato	1,0%	0,6%
Prosciutto cotto sgrassato	1,0%	0,5%
Prosciutto crudo nazionale	8,1%	5,0%
Prosciutto crudo nazionale sgrassato ²	2,9%	1,8%
Prosciutto di Modena DOP	14,1%	5,8%
Prosciutto di Modena DOP, sgrassato ²	5,2%	2,1%
Prosciutto di San Daniele DOP	12,0%	4,6%
Prosciutto di San Daniele DOP, sgrassato ²	4,0%	1,5%
Prosciutto Toscano DOP	15,5%	6,1%
Prosciutto Toscano DOP, sgrassato	7,3%	2,0%
Salame Brianza DOP	23,6%	7,7%
Salame Milano	15,1%	4,2%
Salame Napoli	18,6%	6,9%
Salame Piacentino DOP	17,7%	6,5%
Salame ungherese	19,8%	6,7%
Salame di Varzi DOP	20,0%	6,1%
Salamini Italiani alla Cacciatora DOP	19,9%	7,3%
Speck Alto Adige IGP	13,9%	9,3%
Wurstel di puro suino	13,5%	6,1%
Zampone Modena IGP, cotto ¹	10,6%	3,9%

¹Cotto = cooked. After 20 mins. cooking, inside the packaging and drained of the cooking liquid.

²Sgrassato = visible fat removed. Values referring to the product without visible fat.

³Arrotolata = rolled up

*Target range for the assumption of macronutrients. IV revision of Dietary Reference Intake for the Italian Population (LARN 2014)

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B VITAMIN

ITALIAN DELI MEATS	Thiamin	Riboflavin	Niacin	Vit. B6	Vit. B12
	% LARN*				
Bresaola della Valtellina IGP	20,5%	5,0%	9,8%	23,6%	19,3%
Coppa	30,7%	6,8%	21,5%	6,5%	17,0%
Coppa Piacentina DOP	24,1%	7,1%	22,9%	5,0%	12,6%
Cotechino Modena IGP, cotto ¹	4,51%	3,6%	9,6%	2,9%	13,1%
Mortadella Bologna IGP	12,0%	4,7%	15,0%	12,1%	6,9%
Pancetta arrotolata ³	18,2%	2,2%	10,2%	2,9%	12,7%
Pancetta Piacentina DOP	9,5%	2,1%	5,8%	3,2%	5,0%
Prosciutto cotto	33,5%	4,6%	15,7%	16,8%	2,3%
Prosciutto cotto, sgrassato	35,0%	5,0%	16,4%	17,7%	
Prosciutto crudo nazionale	29,0%	7,3%	19,5%	45,5%	
Prosciutto crudo nazionale sgrassato ²	32,0%	8,1%	21,4%	50,0%	
Prosciutto di Modena DOP	29,5%	7,7%	19,9%	45,5%	8,2%
Prosciutto di Modena DOP, sgrassato ²	35,0%	9,2%	23,5%	53,6%	
Prosciutto di San Daniele DOP	34,0%	7,7%	18,3%	47,3%	11,7%
Prosciutto di San Daniele DOP, sgrassato ²	39,0%	8,8%	21,0%	54,1%	
Prosciutto Toscano DOP	28,0%	6,8%	18,1%	32,8%	11,8%
Prosciutto Toscano DOP, sgrassato	32,7%	7,5%	20,7%	39,2%	13,6%
Salame Brianza DOP	20,5%	5,3%	18,1%	3,9%	11,0%
Salame Milano	26,3%	6,4%	17,7%	7,5%	14,1%
Salame Napoli	25,4%	5,4%	18,6%	6,2%	11,0%
Salame Piacentino DOP	18,6%	6,8%	19,1%	3,9%	10,4%
Salame ungherese	23,0%	6,6%	13,6%	6,0%	13,0%
Salame di Varzi DOP	24,5%	6,4%	22,5%	4,2%	10,8%
Salamini Italiani alla Cacciatora DOP	24,9%	5,2%	27,6%	39,7%	12,9%
Speck Alto Adige IGP	20,5%	6,2%	14,6%	21,4%	8,2%
Wurstel di puro suino	9,5%	2,9%	5,0%	1,8%	
Zampone Modena IGP, cotto ¹	3,2%	3,2%	9,2%	1,5%	11,5%

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³Arrotolata = rolled up

*Target range for the assumption of macronutrients. IV revision of Dietary Reference Intake for the Italian Population (LARN 2014)

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MINERALS

ITALIAN DELI MEATS	Potassium	Phosphorus	Magnesium	Iron	Zinc	Copper	Selenium
	% LARN*						
Bresaola della Valtellina IGP	54,3%	23,2%	7,7%	18,8%	22,5%	5,2%	6,4%
Coppa	59,0%	19,9%	7,9%	9,5%	18,5%	7,1%	10,9%
Coppa Piacentina DOP	47,6%	24,3%	10,6%	13,1%	22,7%	8,6%	36,4%
Cotechino Modena IGP, cotto ¹	19,0%	7,8%	2,7%	10,3%	8,1%		10,9%
Mortadella Bologna IGP	27,1%	10,2%	3,8%	7,4%	7,8%		18,2%
Pancetta arrotolata ³	31,8%	10,1%	3,5%	2,5%	6,4%	3,8%	10,0%
Pancetta Piacentina DOP	21,0%	10,2%	4,1%	3,6%	8,4%	3,6%	9,1%
Prosciutto cotto	26,8%	10,9%	3,6%	3,5%	5,5%	5,6%	9,1%
Prosciutto cotto, sgrassato	27,2%	12,2%	3,9%	4,8%	7,3%	6,7%	9,1%
Prosciutto crudo nazionale	27,7%	11,7%	3,8%	4,1%	6,4%	5,1%	13,6%
Prosciutto crudo nazionale sgrassato ²	52,8%	17,8%	7,0%	7,5%	13,6%	4,0%	14,5%
Prosciutto di Modena DOP	53,6%	16,9%	6,5%	5,9%	10,4%	3,4%	15,5%
Prosciutto di Modena DOP, sgrassato ²	62,3%	21,0%	8,2%	8,9%	16,1%	5,0%	18,2%
Prosciutto di San Daniele DOP	50,1%	15,8%	6,0%	6,6%	11,9%	2,9%	12,7%
Prosciutto di San Daniele DOP, sgrassato ²	57,5%	18,2%	6,8%	9,0%	13,7%	3,6%	11,8%
Prosciutto Toscano DOP	40,9%	19,9%	8,5%	7,5%	14,0%	5,7%	18,2%
Prosciutto Toscano DOP, sgrassato	46,2%	22,4%	9,4%	8,6%	16,0%	6,4%	27,3%
Salame Brianza DOP	43,0%	21,8%	8,5%	10,6%	17,8%	7,1%	18,2%
Salame Milano	56,6%	17,6%	6,3%	8,5%	15,2%	9,6%	16,4%
Salame Napoli	57,5%	17,9%	6,6%	6,3%	12,3%	7,8%	15,5%
Salame Piacentino DOP	45,0%	22,8%	9,7%	8,4%	19,7%	7,1%	27,3%
Salame ungherese	54,9%	16,1%	5,0%	7,7%	13,6%	8,8%	14,5%
Salame di Varzi DOP	44,0%	22,9%	9,7%	9,6%	19,0%	6,4%	27,3%
Salamini Italiani alla Cacciatora DOP	59,8%	17,6%	6,3%	7,3%	12,7%		12,7%
Speck Alto Adige IGP	56,7%	23,5%	8,0%	10,1%	12,3%	5,1%	13,6%
Wurstel di puro suino	6,5%	7,6%		3,6%	5,8%	25,0%	9,1%
Zampone Modena IGP, cotto ¹	11,4%	5,9%	2,2%	9,1%	7,5%		10,9%

¹Cotto = cooked. After 20 mins. cooking, inside the packaging and drained of the cooking liquid.

²Sgrassato = visible fat removed. Values referring to the product without visible fat.

³Arrotolata = rolled up

*Target range for the assumption of macronutrients. IV revision of Dietary Reference Intake for the Italian Population (LARN 2014)

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All the other value refer to 2011 nutrition tables.

LEGISLATIVE REQUIREMENTS

REGULATION (EU) No 1151/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 November 2012 on quality schemes for agricultural products and foodstuffs (published in the Official Journal of the European Union L 343 of 14.12.2012) and following delegated and implementing Regulations: 1) Delegated Regulation (EU) No 664/2014 of 18 December 2013, published in the OJ L 197/17 of 19.06.2014; 2) Delegated Regulation (EU) No 665/2014 of 11 March 2014 published in the OJ L 179/23 of 19.06.2014; 3) Implementing Regulation (EU) No 668/2014 of 13 June 2014, published in the OJ L 179/36 of 19.06.2014.

Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, published in the OJ L 304 of 22.11.2011. Decree (Italy) 14 October 2013 on national provisions for the implementation of the REGULATION (EU) No 1151/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 November 2012, published in the Italian Official Gazette No. 251 of 25/10/2013.

Decree (Italy) 27 December 2012, by which Mipaaf has created the National Register of Monitoring Officers (Agenti Vigilanti), namely professionals charged with identifying misuse or imitation of protected (PDO and PGI) foodstuffs, published in the Italian Official Gazette No. 15 of 18.01.2013.

Decree (Italy) 12 May 2010 on general provisions for the control of agricultural Consortia's activities, published in the Italian Official Gazette N.121 of 26.05.2010.

Decree (Italy) 19 November 2004, No. 297 on sanctions referring to the application of COUNCIL REGULATION (EEC) No 2081/92 of 14 July 1992, now EC 1151/2012, concerning the protection of geographical indications and designations of origin for agricultural products and foodstuffs, published in the Italian Official Gazette No. 293 of 15 December 2004.

Law (Italy) 21 December 1999 No. 526 on dispositions for the fulfilling of duties deriving from the belonging of Italy to the European Union; Art. 14 introduces the principles for the recognition of Protection Consortia and their specific activities (published in the Italian Official Gazette No. 13 of 18.01.2000, Ordinary Supplement No. 15).

Decreets (Italy) 12 April 2000 No. 61413 and 61414 - Mipaaf's decrees on provisions concerning the requirements of representativeness of Consortia protecting food products with Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI), the criteria of representativeness in the organs of the company (published in the Italian Official Gazette No. 97 of 27.04.2000) and following integrations.

Decree (Italy) 12 September 2000 No. 410 on the adoption of the regulation concerning the allocation of the costs resulting from the activities done by the Consortia representing PDO and PGI food products, after being authorized by Mipaaf (published in the Italian Official Gazette No. 9 of 12.01.2001).

Decree (Italy) 12 October 2000 on the partnership between the Protection Consortia dealing with PDO and PGI food products and the Central Inspectorate for quality safeguarding and anti-fraud of foodstuff and agricultural products (ICQRF) for the purpose of monitoring and safeguarding protected agri-food products. (published in the Italian Official Gazette No. 272 of 21.11.2000)

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