

**MISLEADING AND COMPARATIVE ADVERTISING  
PI4927 – 100% DEGRADABLE COOP BAGS**

*Provision No. 15104*

THE ANTITRUST AUTHORITY IN ITS MEETING on 11 January 2006

ON HEARING the speaker Councillor Antonio Catricalà

HAVING REGARD TO Legislative Decree No. 206, of 6 September 2005, entitled “Code of consumption”, published in the Ordinary Supplement to the Official Gazette – General Section, No. 235, 8 October 2005, which, from its date of coming into force cancels the Legislative Decree No. 74, of 25 January 1992, as last modified by the Law No. 49, of 6 April 2005.

HAVING REGARD TO the Regulations on preliminary procedures concerning misleading and comparative advertising, as mentioned in Presidential Decree No. 284, of 11 July 2003.

HAVING REGARD TO the deeds of the proceedings.

IN CONSIDERATION of the following:

**I. REQUEST FOR INTERVENTION**

With their request for intervention received on 27 June 2005, supplemented on 4 July 2005 with a copy of the advertisement, a consumer association and an environmental association jointly reported the presumed deceptive nature of an advertisement published by the limited liability cooperative company COOP Italia in the Italian newspapers “la Repubblica” and Corriere della Sera”, on 16 June 2005, intended to promote the COOP name by presenting new shopping bags available at the sales outlets, of which the characteristics of ecocompatibility were particularly emphasised.

In the request for intervention, objection was made of the presumed harmfulness for the environment and, therefore, for man, of the additive (EPI-TDPA) used to produce the bags spoken about in the advertisement, and its misleading nature, insofar as by emphasising the bags’ characteristics of degradability, it makes the reader believe that they can be used for the separate collection of waste, including organic waste, when, in fact, this is not possible given that their composition does not satisfy the UNI EN 13432 standard (“*Requirements for packaging recoverable through composting and biodegradation – Test scheme and evaluation criteria for the final acceptance of packaging*”), the satisfaction of which assumes conformity with European Directive 94/62/CE on packaging and waste from packaging.

**THE ADVERTISEMENT**

The advertisement covered a whole page, and contained the image of a plastic bag; there was writing above and below.

The handles of the white bag were held by a large green leaf. On the bag, there was the name *Coop*, the phrase “LA COOP SEI TU” (“YOU ARE COOP”), in red characters, the phrase “*Primo in Italia*” (“The first in Italy”), in green letters, and the claim “100% DEGRADABILE” (“100% DEGRADABLE”), in large white letters on a green rectangle. The name in red and the green rectangle had the same height and width.

Next to the green leaf, top left, there was the phrase, “Nuovi sacchetti Coop degradabili al 100%. Per essere utili anche alla natura” (“New Coop bags, 100% degradable. To be useful also to nature”).

The text continued at the bottom of the page, beneath the bag.

After the statement, in bold capital letters, “TI AIUTANO A FARE LA SPESA, TI AIUTANO A RISPETTARE LA NATURA”, (“THEY HELP YOU TO DO THE SHOPPING, THEY HELP YOU TO RESPECT NATURE”), there was the following explanation: “When we do the shopping, nature must not pay the price. This is why, for the first time in Italy, Coop have introduced plastic bags that respect the environment.

The plastic contains an additive, EPI-TDPA, which, when mixed with traditional polyethylene, makes it completely degradable. Within three years it decomposes, without releasing harmful substances, unlike bags in polyethylene, which stay in the environment for centuries.

Degradable does not mean less useful. In fact, Coop bags are as resistant as traditional bags, cost no more, and can be reused a number of times. So, they are ecological, but when you don’t need them any more, they can be thrown in the waste bin. Today, nature will like it a lot when you do your shopping at Coop.”

The advertisement ends with the statement “*DIFESA DELL’AMBIENTE. UN ALTRO VANTAGGIO COOP*” (“DEFENCE OF THE ENVIRONMENT. ANOTHER ADVANTAGE OF COOP”), with a line underneath in yellow leading to a ring containing the Coop name, and the slogan “YOU ARE COOP”, in the traditional red letters.

### **III. COMMUNICATION TO THE PARTIES**

On 20 July 2005, the petitioners and the limited liability cooperative company COOP Italia, as advertiser, were informed that proceedings were being started, in accordance with Articles 1, 2, 3 and 5 of Legislative Decree No. 74/92 (now Articles 19, 20, 21 and 24 of Legislative Decree 206/05), to determine the actual characteristics of ecocompatibility of the shopping bags described in the advertisement reported, with particular reference to their characteristics of degradability, biodegradability and recyclability, as well as to the likelihood that the process of decay of these bags, and to the additive contained in them will harm the environment, and, consequently, in the absence of suitable information, put in danger the safety and health of the consumers by causing them to neglect the normal rules of care and supervision.

### **IV. RESULTS OF THE PRELIMINARY PROCEEDINGS**

At the time of starting proceedings, the limited liability cooperative company COOP Italia (hereafter referred to as COOP), as advertiser, was asked to provide information and associated documentation concerning: the chemical characteristics of the components of the shopping bag in question, with particular reference to the additive EPI-TDPA and to its lack of harmfulness for the environment; the decay characteristics, without the release of substances dangerous for the environment, of the bags in question, with, in particular, a description of the decay process they undergo; the possibility of using the bags for the separate collection of waste, including organic waste; any compatibility of the bags’ composition with the UNI EN 13432 standard; any studies, publications or other documentation of a scientific nature on the characteristics of degradability, without the release of harmful substances, of the components of the shopping bag, and on the effectiveness of the substances present in the said products in achieving the advertised results. Furthermore, a request was made for information about the advertising schedule for the advertisement for which intervention was asked, and on the duration and extent of the promotion campaign that included the reported advertisement. The petitioning associations were also asked to provide a copy of the study by IBAW1, mentioned in the report, and any other documentation of a scientific nature they had available relating to the case.

On 22 July 2005, the petitioning associations sent a memorandum, attaching a copy of the following documentation: a publication by Dr. Georgina Davis, entitled “*Composting plastics a new study explores the potential of biodegradable polymers for use in the collection of organic waste from households*”, published in the scientific magazine Resource, No. 5, June/July 2002; a publication by Dr. Francesco degli Innocenti, entitled “*A report about the actual behaviour of degradable PE sacks under composting conditions*”, dated 19/9/03; the final report by the European Project entitled “*Labelling biodegradable products*”, dated September 2002; a test produced and published by the company Enviros Consulting Ltd, dated September 2003, entitled “*Evaluation of compostable polymer bags*”, on the compostability of three different types of plastic bag (Mater-Bi, EPI-TDPA, and a third, unidentified, currently being studied); the position of IBAW, of 3 June 2005, on products made of polyethylene (hereafter P.E.) that are defined degradable.

The advertiser sent his memoranda on 4 August, 29 November and 12 December 2005, attaching copies of the following laboratory studies commissioned by the company that manufactures the additive EPI-TDPA mentioned in the advertisement, EPI Environmental Plastics Inc. (hereafter also EPI): a study by the “Blaise Pascal” University CNEP (Centre National d’Evaluation de Photoprotection), dated 25 February 2002, on the biodegradation of the material made with TDPA; two studies by the University of Pisa, Department of Chemistry and Industrial Chemistry, dated 2003, on the biodegradability of plastics treated with TDPA; an EPI document, dated June 2000, that reports the outcome of a study, by the University of Vienna, of the biodegradability and compostability of polyethylene containing the additive TDPA on the basis of an extensive test carried out at the state composting works in Vienna Neustadt; a test on the ecotoxicity of compost from polyethylene containing the additive TDPA, dated 16 March 2000, carried out by the Belgian company OWS.

On 24 November 2005, COOP were asked to send a copy of a test that they had voluntarily commissioned by an independent laboratory “*to verify the decay curve of the shopping bag on the basis of existing European norms, with fully positive results*”, according to what the company claimed in a communication published on the Internet. COOP sent a copy of the text in question, dated 30/9/2004, which dealt with the biodegradability of the bags in relation to the norms ISO 14856, EN 13432, DIR 94/62/CE. COOP also sent a copy of the test report on

the UNI EN 13432 standard, produced in July 2005, on their request, on the quantity of heavy, and therefore dangerous, metals contained in the bags; a statement by the Head of the Laboratory for Ecocompatible Biomaterials and Polymeric Materials of the Department of Chemistry and Industrial Chemistry of the University of Pisa, about the biodegradability of polyethylene that contains the additive TDPA. COOP also sent an information chart on the characteristics of TDPA produced by EPI; a summary of the technology and of the effects of using the additive, which can be found on the website [www.epi-global.com](http://www.epi-global.com); an EPI document on the compatibility of the compound TDPA-PE with food containers; a copy of the position of the OPI2, dated 15 June 2005, on the non harmfulness for the environment and for man of the COOP bags containing the additive TDPA.

On 7 December 2005, the information requested about the technical-scientific truthfulness and plausibility of the statements, as a whole, made in the advertisement under examination, in light of the documents sent by the parties involved in the proceedings, was sent by APAT – Agenzia per la Protezione dell’Ambiente e per I Servizi Tecnici (the Environmental Protection and Technical Services Agency).

On 24 November 2005, the parties were informed of the date of conclusion of the preliminary investigation, in accordance with Article 12, Paragraph 1, of Presidential Decree No. 284/03. The term was extended on the request of COOP, the defendant. The petitioning associations did not send any further memoranda.

On the matter of the schedule of the advertisement for which intervention was requested, and on the duration and extension of the promotion campaign containing the advertisement reported, COOP stated, on 25 July 2005, that no further publication was planned of the advertisement, and that they undertook not to make any further use of it.

On 29 November 2005, COOP sent a copy of their final balance sheet (statement of profit and loss, and statement of assets and liabilities). From all of the technical-scientific documents obtained in the proceedings, the following is inferred.

Shopping bags are now commonly used, and come under the category of packaging. The shopping bags normally available at sales outlets may be made of paper, fabric or plastic, the latter appearing to be preferred by the consumer because of their flexibility, resistance and price. The term plastic does not indicate a specific material, but a series of chemical compounds (polymers), that consist of a number of large, and therefore heavy, molecules, which in turn consist of the repetition of many small structural units that are bound together to make the polymer chain. Traditional plastics are made from oil, which is a non-renewable source, is expensive, and has a high environmental impact; although oil and its derivatives are natural in origin<sup>3</sup>, they are not biodegradable, whatever the standard referred to.

In a broad sense, biodegradability is an intrinsic quality of some materials, as a result of which these turn into carbon dioxide, water and a cellular biomass by a natural process of organic decay.

According to what was presented by APAT in its report, the technical-legal definition of biodegradability was established by the European norm UNI EN 134324.

This regulation arose from a specific mandate by the European Commission to CEN (the European Committee for Standardisation), in relation to the Directive 94/62/EEC on packaging, to define suitable standards to “*minimise the impact of packaging and of waste from packaging on the environment, and to avoid barriers to free trade and distortions in competition, and to define the essential requirements that govern the composition, reusability and recoverability of packaging*”. The norm was published by CEN in September 2000, and became a standardised European norm in 2001. The norm establishes the requirements of packaging recoverable by composting<sup>5</sup> and biodegradation, and determines the test schemes and the evaluation criteria for the final acceptance of the packaging.

In order to respect the conditions described in the norm UNI EN 13432, packaging must not contain more than 50% inorganic materials, or heavy metals that exceed a certain quantity, it must be biodegradable (that is, at least 90% of its mass must decompose into carbon dioxide, water and cellular mass, in a short time, depending on the test used, and in any case within a maximum of 6 months<sup>6</sup>), it must disintegrate (that is, at least 90% of its mass must break up into particles that are no larger than 2 mm, after a maximum of 12 weeks of undergoing composting), and it must not have a negative effect on the chemical quality of the compost, or the growth of micro-organisms.

The most widespread shopping bags are made of Polyethylene, also known as Polythene, indicated with the abbreviation PE. Polyethylene, which is obtained from oil by polymerising ethylene, is an extremely versatile product that has many applications<sup>7</sup>. Because of its molecular structure, PE is known to maintain its physical and chemical characteristics for an extremely long time. Therefore, bags made of PE have a lifecycle that is much longer than the normal cycle of use, and, if disposed of in the environment, there is an accumulation for

centuries. At the same time, more than 90% of PE may be recycled<sup>8</sup>, and it can be usefully employed as a source of energy.

In view of the overall characteristics of Polyethylene, and given that it comes from a non-renewable source, the environmental impact of packaging products made of PE, and of shopping bags in particular, depends also on the efficiency of the process of separately collecting solid urban waste and of the plants for recycling plastic materials, and therefore, on the choices made by public authorities and on the correct behaviour of consumers. If sent to a dump, or left in the environment, there is an accumulation for centuries; if used for the collection of organic waste, it interferes negatively on the process of composting.

Since the 1980s, applied research has set out to prepare types of products for packaging that can reconcile the advantages of using plastic with safeguarding the environment, industrial costs and social costs.

Therefore, the first plastics appeared on the market whose biodegradability was shown and certified; these were polymers that could be obtained entirely from renewable sources (natural polymers, extracted as such from starch, and cellulose, synthetic polymers, such as PLA, a derivative of polylactic acid, or produced by genetically modified micro-organisms or bacteria), or that could be a mixture of renewable sources and oil (such as Mater-Bi, mentioned in the EPI-TDPA compostability test).

These materials can be used to produce compostable packaging, and the shopping bags made with them are destined, by choice, for the collection and disposal of solid organic urban waste; however, they are sold at a price that the consumer considers to be high, and although the consumption of biodegradable polymers in Europe is constantly increasing, it does not appear to be stopping the consumption of the traditional plastic shopping bags.

Therefore, in view of the fact that sensitivity to environmental issues is becoming an important factor in purchasing choices, but that the price of the shopping bag still appears to influence the average consumer's inclination to purchase bags made of biodegradable plastic, the chemical industry took on the job of researching even more innovative materials, that would lead to final products with physical and mechanical properties that are similar to those of PE products, but that have a different chemical behaviour and that can be sold at a comparable price to those of PE bags.

After a few unsatisfactory attempts, mixtures of chemical substances appeared on the market, that were presented as being able to cause the biodegradation of traditional plastics into the ground, and not to interfere with the processes of composting if included in compost. These plastics were defined indifferently as biodegradable, oxodegradable and degradable.

In this sense, TDPA<sup>9</sup>, which is mentioned in the COOP advertisement, is a registered trademark used for a family of chemical additives developed by EPI, that are used to modify some of the characteristics of traditional plastic products made with oil derivatives. In particular, the shopping bag advertised is made of PE that contains 2% of the additive DCP 542, which, according to the claims of the manufacturer, is a patented mix of chemical substances, *"prodegradants, stabilizers and fillers in a polyolefin based resin carrier, for use in various food contact polyolefin products for the photo, thermal and mechanical stress degradation of the finished products incorporating this additive"*.

According to the studies carried out by the manufacturer, TDPA is able to cause the oxidative decay of PE, thereby allowing its disposal through a process of fragmentation of the polymeric chain, and subsequent biodegradation.

The process of fragmentation, which is started by heat, ultraviolet waves and/or mechanical stress, is catalysed by the additive in question. The physical sign of this chemical decay is disintegration, so that the result of this process apparently does not contain the original plastic materials, but relatively small hydrophilic molecules that contain oxygen. Therefore, the additive accelerates the well-known, but very slow, reaction of polyethylene with oxygen in the air, in a controlled manner. This apparently makes the bag disintegrate physically in a few weeks, when it is exposed to sunlight or to heat.

The products of the fragmentation apparently have a wettability that is considerably greater than that of the original samples, and are susceptible to attack by the bacterial flora present in soils of various origins and in mature compost, with conversion into carbon dioxide and cellular biomass.

According to the manufacturer's claims, the bags made with DCP 542 have a useful lifetime of approximately 18 months (considering the shelf life and service life), if appropriately stored; once left in a rubbish dump, the film loses its mechanical and physical properties, and, in a period of approximately 14-16 months, disintegrates and breaks up into small pieces.

Again from the manufacturer's claims, the quantity of heavy metals contained in the additive is compatible with the relevant European norm, and it does not release substances defined as toxic, by international standards, into the environment.

COOP themselves had an Italian laboratory carry out a special test on the metals contained in the bags, and the results obtained were in line with the limits stipulated by the norms.

On the whole, in the studies presented by COOP, carried out by the manufacturer, it is claimed that the characteristic degradation of the product occurs in two stages: the first is apparently caused by oxidation, the second is the biodegradation brought about by living organisms. The product's characteristic is called thermooxidative biodegradation of TDPA-PE, and the products made with this mixture are defined as biodegradable, or oxobiodegradable plastics.

As for the compostability of the bags made of TDPA-PE, while the study commissioned by the manufacturer from an Austrian composting plant (organic waste, of which bags accounted for 1.1%) mentions achieving results compatible with Austrian regulations in 26 weeks (60% biodegradation in this period of time), a similar study carried out by a British company reports unsatisfactory decay results of this material in 12 weeks.

On this matter, however, the manufacturer claims that the EPI material disintegrates easily during composting, but that it does not satisfy all of the requisites of the norm UNI EN 13432, stating that, in any case, the disintegration standards are subject to change and that the absence of toxicity for plant and animal life, shown by a study carried out in 2000, is a more important criterion.

In 2004, that is, before marketing, COOP had the bags made of TDPA-PE containing 2% additive undergo an independent biodegradability test, in accordance with European norm UNI EN 13432, the results of which were negative for the percentage of biodegradability achieved (45% with respect to cellulose). Therefore, TDPA-PE is not a biodegradable material, even according to the ASTM standard.

As for the technical-scientific value of the term "degradation" of plastic materials, APAT highlighted in their report that, at present, this has not been established by shared international standards, either at a scientific, or at a regulatory level. With regard to the characteristics of the product, APAT said that it would be more appropriate to speak in terms of fragmentation of the polymeric chain and physical fragmentation of the bag.

In the report by the University of Pisa, deposited last of all by COOP, it is stated that a workgroup (WG9) of the technical standardisation committee TC 249 on plastics, was commissioned to define a regulatory standard for the degradation of polymeric materials and related plastics under different environmental conditions, and that the ASTM D20.96 Committee on Biodegradation published in May 2005 a Standard Guide (D6965-04) on "*Exposing and Testing Plastics that degrade in the Environment by a combination of oxidation and biodegradation*".

In its final memorandum, COOP said that, contrary to what was claimed by APAT in their report, the total degradation of the plastic used to manufacture shopping bags consisted not only of the "*decomposition of the plastic with splitting of the polymeric chain*", but "*also the degradation of this polymeric chain into compounds that, by means of the oxidation process of the polymers and of the subsequent hydration (absorption of water), allow them to be attacked by fungi and bacteria present in the soil, which in turn reduce the polymeric remnants in the biomass stage*".

As for decoding the advertisement, in the opinion of the advertiser, this was a concise, but correct representation of the technical characteristics of the product in question; there was no iconic, chromatic or, more generally, semantic element in the message that could make the consumers believe that the bags advertised were biodegradable or that they could be used for disposing of organic waste. In fact, the advertisement clearly claimed that the new Coop bags were more useful in protecting the environment than those in traditional polyethylene, as it has been shown that a degradable bag has less impact than a bag made of plastic that does not contain the EPI-TDPA additive. Furthermore, the part of the advertisement that warned the consumer of the need to dispose of the bags with the undifferentiated waste, inviting him not to discard them into the environment, but to dispose of them in a dump, is equally clear. However, the studies carried out apparently show that should they be used to collect organic waste, this would not result in serious damage to the environment, because the bags containing the additive EPI-TDPA undergo complete biodegradation within an acceptable length of time.

## **V. OPINION OF THE COMMUNICATIONS REGULATORY AUTHORITY**

In view of the fact that the advertisement appeared in two daily newspapers, the Communications Regulatory Authority was asked, on 12 December 2005, to provide an opinion, as provided for by Article 26, Paragraph 5 of Legislative Decree No. 206, of 6 September 2005.

With its opinion sent on 10 January 2006, the said Authority judged the advertisement in question to be misleading, in accordance with Articles 19, 20 and 21 of Legislative Decree No. 206/05, on the basis of the following considerations:

the technical report by APAT (the Environmental Protection and Technical Services Agency), dated 7 December 2005 claims that research in the field of the degradability and toxicity for the

environment of materials such as PE that contains additives has still not reached a final conclusion; the outcome of research carried out is that the definition of biodegradability differs from one international standards organisation to another, and consequently, the samples produced for defining which plastics are biodegradable give results that cannot be compared; as a result, the solution must be of a prescriptive nature, where the definition of “degradability” given by COOP in its advertisement is not given by any regulations, accepting that it is legitimate to sell the new COOP bags, and that what is claimed in the advertisement reported is true, the object of the advertisement, enhanced by the image of the bag held by the leaf, is the bags’ ability to respect nature, where the complete decay in 36 months after its use does not imply the necessarily ecological nature expressed by the advertisement, the advertisement, as it is, provides suitable information to make consumers aware that the bags should be thrown away in the undifferentiated waste, and is therefore not likely to put in danger the safety and health of consumers by making them neglect the normal rules of care and supervision, as established by Article 24 of Legislative Decree 206/05, the increased sensitivity of consumers to environmental issues may make those who lack the necessary technical competence think that the new COOP bags can guarantee decay without releasing substances that are harmful into the environment; this may make them choose a brand that pays attention to environmental issues, in the mind of the general public, the expression “100% degradable” suggests the concept of biodegradability, which does not apply to the characteristics of the products in question, as emerges from the scientific studies, which admit that they cannot prove the validity of the results obtained under different environmental conditions, and from the memoranda of the advertiser, which acknowledge that, in the decaying process, substances that are harmful for the environment are produced, although not in significant quantities, as a result, the advertisement *de quo* causes the belief that the new COOP bags are environmentally compatible, and consequently is able to influence the choice of consumers unduly, because of the use of the expression “100% degradable” and of the boasted “benefit” for nature, to the extent that the average consumer will believe that the make associated with the bags is one that guarantees environmental protection

- the advertisement for the new COOP bags published in the newspaper “Corriere della Sera” on 16 June 2005, is likely to mislead the people it is directed at, or that see it, over the characteristics of the new COOP bags, by implying, contrary to the truth, that they are ecocompatible, and, because of its deceptiveness, may induce these people to go to COOP to shop, on the basis of inexistent characteristics.

## VI. CONCLUDING EVALUATION

The advertisement under examination leads the reader to understand that COOP have implemented an initiative that is unprecedented in Italy, that combines respect for nature with everyday habits. So, by shopping at COOP, consumers can also help nature, because they can put the products purchased into plastic bags that respect the environment and are liked by nature: they are 100% degradable! The advertisement explains how it is possible to achieve this technically: the bags contain an additive, EPI-TDPA, which, when mixed with conventional Polyethylene, makes it totally degradable. Within three years, this plastic decays without releasing harmful substances, whereas polyethylene bags remain in the environment for centuries. Respecting the environment by using these bags does not entail any sacrifice for the consumer: degradable does not mean of less use. The bags are as resistant as traditional bags, they do not cost any more, and can be reused a number of times. This makes these bags ecological, they can be thrown away with the waste when they are no longer needed.

By making these bags available to consumers, COOP take an important step to defend the environment, by offering their clients another, tangible advantage.

Furthermore, the advertisement also contains an immediately evocative iconic reference, the large green leaf holding the handles of the bag, and uses the colour green, with equally evocative skill, for the characters of the claim “*First in Italy*”, and for the large rectangle that contains the phrase “*100% DEGRADABLE*”.

Thus, because of the presence of categorical statements, of insistent phrases, of terms such as “100% degradable”, “breaks down”, “ecological”, of precise iconic and chromatic symbols, the advertisement under examination makes the consumer believe that the bags in question are perfectly compatible with nature.

Firstly, we must point out the non deceptiveness of the advertisement with respect to the contested violation of Article 24 of Legislative Decree No. 206/2005. According to the technical-scientific documentation produced by the manufacturer, and according to the tests of the heavy metals that COOP independently had carried out on the 2% DCP, contained in the proceedings, the additive in question is not toxic, and the transformation process of PE containing the additive

does not appear to be likely to release into the environment substances defined as toxic, according to European regulations.

Moreover, in relation to the claim about the innovative nature of the COOP initiative, the objections of the petitioners, and the preliminary results do not put this aspect in doubt. Indeed, this product may be an example of a compromise between environmental reasons and economic costs.

At the same time, this product presents chemical characteristics that are difficult for the average consumer, who is made to believe that it is perfectly compatible with nature, and therefore biodegradable, to understand.

On this matter, we should point out that, for them to have a concrete meaning, the notions of ecology and compatibility with nature of man-made products actually require very complex evaluations of multi-factorial processes, that are interconnected but not easy to reconcile, and not available to the average consumer.

The distribution of enormous quantities of, often disposable, packaging, linked to the new styles of consumption brought about by the development of production and distribution processes, entails significant, environmental and economic costs for society. We need only think of the size of the problem of waste, not only in developed societies, and of the increasingly urgent demand for ecological policies that protect the environment, and therefore, the health of mankind<sup>10</sup>. An assessment of the environmental impact takes numerous factors into account, for example, whether the raw materials used are renewable or not, the technologies used to manufacture the products, whether the materials can be recovered or not after the products have been used, and their ability to change into materials that can be used by man, or that can provide energy, the most suitable waste collection system to guarantee the recoverability of the materials, the release of harmful substances during the process of disposing of the waste, and the overall production of carbon dioxide by the end of the whole cycle. In the case of policies oriented towards sustainable development, these factors, individually and together, are weighed against the costs they entail, with a cost/benefit analysis.

The results shared by the scientific community have led to a series of technical norms for the standardized classification of materials, which have in turn formed the basis of regulations adopted by public authorities, that represent an acceptable compromise between environmental impact and the cost to society.

No matter how much we agree that biodegradability is a quality of materials as a result of which they change into carbon dioxide, water and cellular biomass, by a natural process of organic decay, the technical definition of biodegradability is not entirely clear, given that it has also been established by technical norms that have subsequently become law. For example, a material may be biodegradable according to the ASTM11 standards, but not according to the European standards contained in the norm UNI EN 13432, which appear to differ in the levels of acceptability of the results, even though they were achieved using similar criteria and standards. Despite the general public's growing interest in environmental issues, we know perfectly well how difficult it is to develop environmentally-friendly policies, to define technical-scientific standards that are shared, and to establish legal norms that set the acceptable limits of risk or the desirable ecological results.

Presenting the bags made of PE containing the additive as respecting nature because they decay 100%, or they decompose in a period of three years if thrown away with waste, the advertisement may confuse the reader about the bags' characteristics of ecocompatibility and of environmental desirability.

In light of what emerges from the studies obtained, the process of decay of this product has two phases that lead to its genuine biodegradation, which, however, as declared by the manufacturer and proved by the advertiser, is not that specified by the relevant European norm UNI EN 13432. Given the observation made by APAT, that it appears to be correct to speak of the product's fragmentation, rather than its degradation, considering that the notion of degradation makes no reference to any European technical-regulatory definition, the advertiser can only repeat that the characteristics in question are determined by the additive's ability to bring about a final transformation of PE into biomass, which means therefore that it is biodegradable. Far from being a mere defining explanation, as it is made to appear by the manufacturer in his documents, this matter emphasises *per tabulas* the inability of the expression "100% degradable" to explain, in itself, the characteristics of environmental compatibility of a product like TDPA-PE in clear and certain terms.

Contrary to what the advertiser claims, the confusion over the environmental compatibility of the bag in question, appears to be made worse by the comparison made with traditional bags made of PE.

On the matter of the Polyethylene bag, the consumer is not put in a position to be able to consider adequately that it derives from a non-renewable source, and that it could be used again

to produce Polyethylene or energy if collected and disposed of correctly (in fact, PE is 90% recyclable). It is the main negative characteristic of this product that is highlighted, a characteristic that stems from a mistaken human behaviour, that of discarding the bag into the environment, or at least abandoning it in a rubbish dump. On the other hand, another product that is also made of PE, that apparently carries out its positive function properly if discarded into the environment or abandoned in a rubbish dump, is presented as being highly desirable. The consumer is not put in the position to be able to understand, on the question of the environmental advantage of PE containing the additive, that as it is sensitive to heat, it is not recyclable. In fact, PE containing the additive is naturally destined for the rubbish dump. Furthermore, the advertisement fails to indicate expressly that this product is not suitable for collecting domestic organic waste, but only for collecting the so-called undifferentiated waste, as acknowledged by the advertiser himself, who could help the consumer to understand the product's characteristics of ecocompatibility.

Therefore, because of the categorical nature of the claims it makes, and because of the confusion caused by the claim "100% degradable" and the indication of the product's destination after use, the advertisement appears to be able to confuse the reader about the actual ecological nature of the shopping bag made with TDPA-PE, and thereby influence his choices of where to shop. In fact, the confusing effect is due to the essential characteristics of the product, with the result that the economic choices of consumers may be unjustly guided towards the COOP name.

## VII. QUANTIFYING THE SANCTIONS

In accordance with Article 26, Paragraph 7, of Legislative Decree No. 206/05, with a decision in favour of the petition, the Authority calls for the application of a pecuniary administrative sanction of between €1000 and €100,000, having taken into account the gravity and the duration of the advertisement.

In quantifying the sanction, account must be taken of the criteria, applicable in this instance, established by Article 11 of Law No. 689/81, in virtue of the reference made in Article 26, Paragraph 12 of the Legislative Decree No. 206/05: in particular, the seriousness of the violation, of the actions of the company to eliminate or extenuate the violation, the characteristics of the person acting, and the economic conditions of the company itself.

On the matter of the seriousness of the violation, account is taken of the economic size of the advertiser, of the esteem acquired by him among consumers, and of the considerable impact of where the advertisement appeared (in the two most important national newspapers).

On the matter of the duration, the advertisement was published for a very short time.

Consequently, taking account of the seriousness and duration, we have decided to impose a sanction of **€26,100**.

Considering also that there are aggravating circumstances in this case, that the advertiser has had other proceedings against him for deception, in violation of Section III, Item II of Legislative Decree No. 206/05 and, moreover, still in relation to the boasted characteristics of quality, safety, genuineness and ecocompatibility of the products, we have decided to impose a pecuniary sanction of **€31,100** on the limited liability cooperative company Coop Italia.

In view of the above:

HOLDING that, in accordance with the opinion expressed by the Communications Regulatory Authority, the advertisement under examination is not likely to cause consumers to neglect the normal rules of care and supervision.

HOLDING, also, in accordance with the opinion expressed by the Communications Regulatory Authority, that the advertisement under examination is likely to deceive consumers over the characteristics of ecocompatibility of the shopping bags provided by COOP in its sales outlets, and thereby influence their purchasing choices.

### THE AUTHORITY DECIDES

**a) that, for the reasons expressed above, the advertisement described in point II of this provision, published by the limited liability cooperative company Coop Italia, is not deceptive, in accordance with Articles 19, 20 and 24 of Legislative Decree No. 206/05;**

**b) that, for the reasons and within the limits expressed above, the advertisement described in point II of this provision, published by the limited liability cooperative company Coop Italia, is deceptive, in accordance with Articles 19, 20 and 21, Paragraph 1, part a), of Legislative Decree No. 206/05, and forbids any further publication.**

c) that the limited liability cooperative company Coop Italia must pay a pecuniary administrative sanction of **€31,100 (thirty one thousand, one hundred euros)**.

The administrative sanction mentioned in the above paragraph c) must be paid within thirty days of notification of this provision, with a direct payment to the agent of the collection service, or

through a bank or through the Italian Post Office, by presenting the form attached to this provision, as allowed for by Legislative Decree No.237, of 9 July 1997.

Once the above-mentioned time has elapsed, for a delay of less than six months, the interest on arrears must be paid, at the legal rate, from the day following the expiry of the term of payment up to the date of payment. In the event of further delay of the payment, in accordance with Article 27, Paragraph 6, of Law No. 689/81, the sum due for the sanction imposed will be increased by one tenth for every six-month period from the day after the expiry of the term of payment, until the payment is made to the collection agent; in this case, the accrued interest on arrears for the period of time is included in the increase in the sanction.

Once the payment has been made, a copy of the form proving payment must be sent to inform the Authority. In accordance with Article 26, Paragraph 10 of Legislative Decree No. 206/05, in the event of failure to carry out the instructions, the Authority will apply a pecuniary administrative sanction of between €10,000 and €50,000. In the event of repeated failure, the Authority may order the company to suspend business for a period of no more than thirty days. This provision will be sent to the parties concerned and published in the Bulletin of the Antitrust Authority.

Any appeal against this provision may be made to the Regional Administrative Court of the Region of Lazio, in accordance with Article 26, Paragraph 12, of Legislative Decree No.206/05, within sixty days of the date of notification of this provision.

THE GENERAL SECRETARY THE CHAIRMAN

*Fabio Cintoli Antonio Catricalà*

1 IBAW – International Biodegradable Polymers Association & Working Groups is an international association that was founded in 1993, that brings together a large number of chemical companies, scientific institutions and individuals interested in promoting the production and distribution of biodegradable plastics and polymers

2 OPI – Oxobiodegradable Plastics Institute is a recently founded international association that brings together the five most important manufacturers (**including EPI**) of plastic materials that contain additives.

3 The average basic chemical composition of oil is carbon, hydrogen, sulphur, nitrogen, oxygen, and mineral substances.

4 According to the indications by APAT, the other relevant European technical norms are: CR 13695-1 (packaging – requirements for determining and verifying the 4 heavy metals present in packaging); CR 13695-2 (packaging – requirements for determining and verifying the toxic substances present in packaging); UNI EN 13429-2005 (packaging – reuse); UNI EN 13430-2005 (packaging – requirements for packaging recoverable by recycling materials); UNI EN 13431- 2005 (packaging – requirements for recovering packaging by recovering energy, including the minimum lower specific heat capacity (???)); UNI EN 13437-2005 (packaging and recycled materials – criteria for the methods of recycling – escription of the recycling treatments and flow diagram); UNI EN 13439-2005 (packaging – recovery rate in the form of energy – definition of the calculation method).

5 Composting is a technique by which the natural process of biological decay that any organic substance undergoes because of the microbial flora naturally present in the environment, is controlled, accelerated and improved, and according to European and Italian norms, it is a method for recovering waste. Therefore, compost is a man-made substance that comes from organic and biodegradable waste, that has the same characteristics as the humus found in nature; it makes the land where plants grow richer and more nourishing. The “decomposing” bacteria that break up the organic material are naturally present in the ground and in waste. The waste that can be turned into compost is organic and biodegradable, that is, the waste that can be broken up and turned into other substances by some bacteria. The organic part of our waste is the part that is of vegetable or animal origin: fruit and vegetable peel, meat or pasta leftovers, and coffee grounds. As well as the organic waste, plant and grass cuttings and leaves can be turned into compost. Collecting our organic waste separately means being able to send it to composting centres.

6 The level considered acceptable by ASTM is 60% of the mass.

7 By altering the process of polymerisation, it is possible to obtain: LDPE (low-density PE) for the production of films, domestic articles, toys, containers, tubes; LLDPE (linear low-density PE) for the production of films; HDPE (high-density PE) for the production of industrial crates and chests, bottles, containers for liquids, fuel tanks and tubes for transporting gases and water under pressure.

8 On the matter of industrial waste in PE, the Italian legislator has set up a compulsory consortium for conferring and recycling, COPIECO.

9 which stands for “Totally Degradable Plastic Additives”.

10 The first definition of the term ecology in scientific literature, as a body of knowledge that studies the relationships between organisms (including man) and their physical environment, tending to discover the laws that govern the economy of nature, dates back to 1868, and in its conciseness it is still valid today. Most of the recent interest in ecology concentrates on the human environment, in view of the continuous increase in the population, and given the growing impact of man’s activities on natural ecosystems (applied ecology)

11 The North American Technical Standardisation institute, of which the industrial association, OPI, mentioned in note 2, is also a member.