

제384호 (1/9)

## 국제공인시험기관인정서

기 관 명 : 농업기술실용화재단

대 표 자 : 전 운 성

법 인 등 록 번 호 : 135871-0007158

사업자등록번호 : 124-82-18476

법 인 주 소 : 경기도 수원시 권선구 서둔동 211-2

사 업 장 소 재 지 : 경기도 수원시 권선구 서둔동 225-2  
경기도 수원시 권선구 서둔동 251

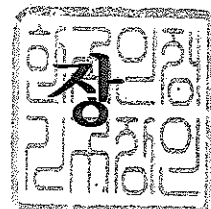
유효 기 간 : 2008년 12월 01일 ~ 2012년 11월 30일

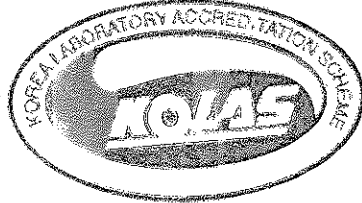
인정분야 및 범위 : 별첨 참조

상기 시험기관을 KS Q ISO/IEC 17025:2006 인정요건 및 국가표준기본법 제23조의 규정에 의거하여 국제공인시험기관으로 인정합니다. 또한 ISO-ILAC-IAF 공동성명(2009.1.8)에 언급된 바와 같이 인정된 분야 및 범위에 대한 기술적 능력과 시험기관 품질경영시스템이 적절함을 인정합니다.

2011년 11월 4일

한 국 인 정 기 구



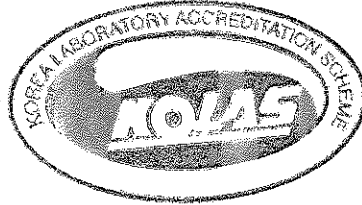


제384호 (2/9)

## 1. 역학시험

### 1.021 자동차

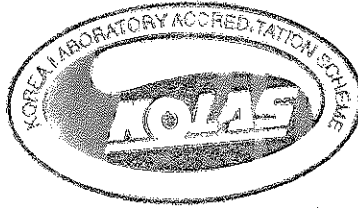
| 규격번호                   | 규격명                                                                               | 시험범위 및<br>검출한계                                                                                                                |
|------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 국립농업과학원 고시<br>제2011-1호 | 농업기계 검정 및 안전관리 세부실시 요령<br>별표3 농용트랙터 시험방법                                          |                                                                                                                               |
|                        | 6-1. 주 PTO 성능시험                                                                   | 최대출력 400 kW<br>최대회전속도 4 500 r/min                                                                                             |
|                        | 6-2. 견인성능시험                                                                       | 최대견인력 100 kN                                                                                                                  |
|                        | 6-3. 작업기승강장치 성능시험                                                                 | 최대양력 100 kN<br>최대출력 100 kW<br>최대유량 250 L/min<br>최대압력 24 000 kPa                                                               |
|                        | 6-4. 제동성능시험                                                                       | 최대답압력 600 N                                                                                                                   |
|                        | 6-5. 선회시험                                                                         | 최대선회반경 5.5 m                                                                                                                  |
|                        | 6-6. 중심위치시험                                                                       | 최대각도 45°<br>최대무게 12 000 kg                                                                                                    |
|                        | 6-7. 소음시험                                                                         | 최대음압레벨 94.0 dB                                                                                                                |
|                        | 6-8. 조향능력시험                                                                       | 최대조향력 170 N · m                                                                                                               |
|                        | 농업기계 검정 및 안전관리 세부실시 요령<br>(별표3 농용트랙터 캡 및 프레임 시험방법)                                | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |
| ISO 789-1:1990         | Agricultural Tractors—Test Procedures—<br>Part 1 : Power Tests for Power Take-off | 최대출력 400 kW<br>최대회전속도 4 500 r/min                                                                                             |
| ISO 789-3:1993         | Agricultural Tractors—Test Procedures—<br>Part 3: Turning and Clearance Diameters | 최대선회반경 5.5 m                                                                                                                  |



제384호 (3/9)

1.021 자동차

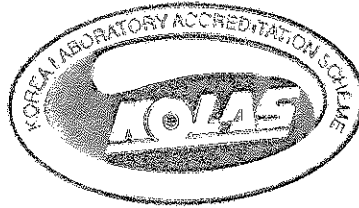
| 규격번호             | 규격명                                                                                                                                      | 시험범위 및<br>검출한계                                                                                                                |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| ISO 789-11:1996  | Agricultural Tractors-Test Procedures-<br>Part 11 : Steering capability of wheeled<br>tractors                                           | 최대조향력 170 N · m                                                                                                               |
| ISO 5700:2006    | Tractors for agriculture and forestry<br>-roll-over protective structures (ROPS)-<br>static test method and acceptance conditions        | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |
| ISO 12003-1:2008 | Agricultural and forestry tractors-<br>roll-over protective structures on<br>narrow-track wheeled tractors<br>Part 1: Front-mounted ROPS | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |
| ISO 12003-2:2008 | Agricultural and forestry tractors-<br>roll-over protective structures on<br>narrow-track wheeled tractors<br>Part 2: Rear-mounted ROPS  | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |



제384호 (4/9)

1.021 자동차

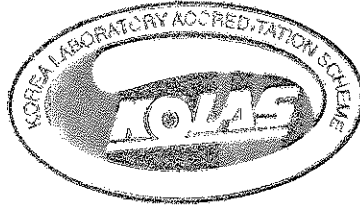
| 규격번호               | 규격명                                                                                                                                            | 시험범위 및<br>검출한계                                                                                                                                  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| OECD code 2 : 2011 | OECD Standard Code for the Official Testing of Tractor Performance                                                                             |                                                                                                                                                 |
|                    | 4.1. Power Take-Off and Engine Tests                                                                                                           |                                                                                                                                                 |
|                    | 4.1.1 Main power take-off                                                                                                                      | 최대출력 400 kW<br>최대회전속도 4 500 r/min                                                                                                               |
|                    | 4.1.1.1 Maximum power test                                                                                                                     |                                                                                                                                                 |
|                    | 4.1.1.2 Test at full load and varying speed                                                                                                    |                                                                                                                                                 |
|                    | 4.1.1.3 Test at varying load                                                                                                                   |                                                                                                                                                 |
| OECD code 2 : 2011 | 4.2. Hydraulic Power                                                                                                                           |                                                                                                                                                 |
|                    | 4.2.1 Test requirements                                                                                                                        | 최대전인력 100 kN<br>최대양력 100 kN<br>최대출력 100 kW<br>최대유량 250 L/min<br>최대압력 24 000 kPa<br>최대담압력 600 N<br>최대각도 45°<br>최대무게 12 000 kg<br>최대조향력 170 N · m |
|                    | 4.2.2 Compulsory steady state hydraulic pressure, flow, and power test - maximum available power                                               |                                                                                                                                                 |
|                    | 4.3. Hydraulic Lift                                                                                                                            |                                                                                                                                                 |
|                    | 4.4 Drawbar Power and Fuel Consumption                                                                                                         |                                                                                                                                                 |
|                    | 4.4.1 Information about tests                                                                                                                  |                                                                                                                                                 |
| OECD code 2 : 2011 | 4.4.2 Draw power and fuel consumption test, unballasted tractor                                                                                |                                                                                                                                                 |
| OECD code 4 : 2011 | OECD standard code for the official testing of protective structures on agricultural and forestry tractors (static test)                       | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg                                                                                                           |
|                    |                                                                                                                                                | 최대수직부하<br>변위 750 mm<br>중량 5 000 kg                                                                                                              |
| OECD code 4 : 2011 | OECD standard code for the official testing of protective structures on agricultural and forestry tractors (static test)                       | 최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg                                                                                                  |
|                    |                                                                                                                                                | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg                                                                                                           |
| OECD code 6 : 2011 | OECD standard code for the official testing of front -mounted protective structures on narrow-track wheeled agricultural and forestry tractors | 최대수직부하<br>변위 750 mm<br>중량 5 000 kg                                                                                                              |
|                    |                                                                                                                                                | 최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg                                                                                                  |



제384호 (5/9)

1.021 자동차(계속)

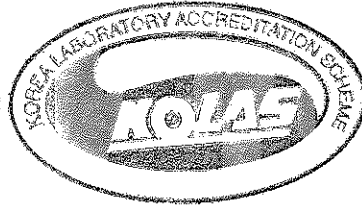
| 규격번호                | 규격명                                                                                                                                                                                   | 시험범위 및<br>검출한계                                                                                                                |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| OECD code 7 : 2011  | OECD standard code for the official testing of rear-mounted protective structures on narrow-track wheeled agricultural and forestry tractors                                          | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |
| OECD code 8 : 2011  | OECD standard code for the official testing of protective structures on agricultural and forestry tracklaying tractors                                                                | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |
| OECD code 10 : 2011 | OECD standard code for the official testing of falling object protective structures on agricultural and forestry tractors                                                             | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |
| EEC 79/622 : 2007   | Council directive on the approximation of the laws of the member states relating to the roll-over protection structures of wheeled agricultural or forestry tractors (static testing) | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |



제384호 (6/9)

1.021 자동차(계속)

| 규격번호              | 규격명                                                                                                                              | 시험범위 및<br>검출한계                                                                                                                  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| EEC 86/298 : 2007 | Rear mounted roll-over protection structures of narrow-track wheeled agricultural and forestry tractors                          | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg   |
| EEC 87/402 : 2007 | Roll-over protection structures mounted in front of the driver's seat on narrow-track wheeled agricultural and forestry tractors | 최대수평부하<br>변위 1 000 mm<br>중량 10 000 kg<br>최대수직부하<br>변위 750 mm<br>중량 5 000 kg<br>최대인장벨트부하 ,<br>변위 500 mm<br>중량 1 000 kg, 5 000 kg |



제384호 (7/9)

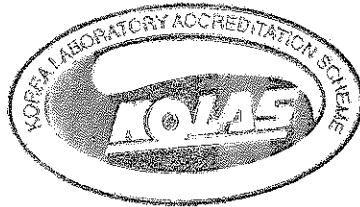
## 2. 화학시험

### 2.013 석유제품

| 규격번호           | 규격명                                                                                                                                 | 시험범위 및<br>검출한계     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| KS E 3707:2001 | 석탄류 및 코크스류 - 발열량 측정방법                                                                                                               |                    |
|                | 8.b) 자동열량계 측정값의 산출                                                                                                                  | 최대 33 500 J/sample |
| EN 14918:2009  | Solid biofuels - Determination of calorific value                                                                                   |                    |
|                | 10. Gross calorific value                                                                                                           | 최대 33 500 J/sample |
| ISO 1928:2009  | Solid mineral fuels - Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value |                    |
|                | 10. Gross calorific value                                                                                                           | 최대 33 500 J/sample |

### 2.019 농축산물

| 규격번호                     | 규격명                                                           | 시험범위 및<br>검출한계                                                             |
|--------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------|
| 농촌진흥청 고시<br>제2010-9호     | 비료의 품질검사방법 및 시료채취기준<br>별표1 비료의 이화학적 검사방법                      |                                                                            |
|                          | 1. 적용범위<br>원자흡광분광법 : 구리, 아연<br>유도결합플라스마발광분광법 : 카드뮴, 크롬        | 구리 0.01 mg/kg<br>아연 0.005 mg/kg<br>카드뮴 0.03 mg/kg<br>크롬 0.03 mg/kg         |
| 농림수산식품부 고시<br>제2009-14호  | 사료공정서 - 사료표준분석방법                                              |                                                                            |
|                          | IV. 무기물<br>16. ICP 발광분광분석법<br>1. 적용범위<br>구리, 아연, 칼슘, 인, 철, 망간 | 칼슘 0.1 %<br>인 0.1 %<br>철 1 mg/kg<br>아연 1 mg/kg<br>구리 1 mg/kg<br>망간 1 mg/kg |
| 식품의약품안전청 고시<br>제2011-62호 | 식품공전 10.4.1.2<br>식품 중 잔류농약분석법 - 다중농약다성분<br>분석법 제2법            |                                                                            |
|                          | Azoxystrobin, Procymidone                                     | Azoxystrobin 50 µg/kg<br>Procymidone 10 µg/kg                              |

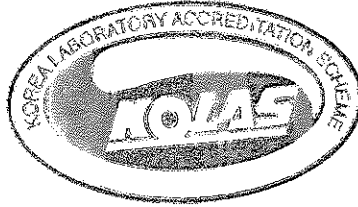


제384호 (8/9)

2.019 농축산물(계속)

| 규격번호                   | 규격명                                                                                                                                        | 시험범위 및<br>검출한계                                                                              |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 국립농업과학원 고시<br>제2011-1호 | 농업기계 검정 및 안전관리 세부실시 요령<br>(별표3 농산물비파괴선별기 시험방법)                                                                                             |                                                                                             |
|                        | 5.2 성능시험<br>5-2-1-3 측정 및 조사항목<br>(1) 선별능률<br>(2) 측정정밀도<br>(가) 중량 측정 정밀도<br>(나) 크기(지름) 측정 정밀도<br>(다) 당도 측정 정밀도<br>(라) 산도 측정 정밀도<br>(3) 이송속도 | 당도(0 ~ 320) mg/g<br>산도 (2 ~ 19.999) %<br>크기 (0 ~ 200) mm<br>중량 (0 ~ 4 000) g<br>(0 ~ 20) kg |
|                        | 농업기계 검정 및 안전관리 세부실시 요령<br>(별표3 저온저장고(50 m <sup>3</sup> 이하) 시험방법)                                                                           |                                                                                             |
|                        | 5.2 성능시험<br>5-2-1. 저장고 보냉성능시험<br>5-2-2. 저장실 온습도조절시험<br>5-2-3. 제상히터 작동시험                                                                    | 온도 (-30 ~ 80) ℃<br>습도 (5 ~ 98) % R.H.                                                       |
|                        | 농업기계 검정 및 안전관리 세부실시 요령<br>별표3 저온저장고(50 m <sup>3</sup> 이상) 시험방법                                                                             |                                                                                             |
|                        | 5-3. 성능시험<br>5-3-1. 단일 성능시험<br>5-3-2. 온·습도조절 성능시험<br>5-3-3. 서리제거 성능시험                                                                      | 온도 (-30 ~ 80) ℃<br>습도 (5 ~ 98) % R.H.                                                       |
| AOAC 930.15            | Animal feed - Loss on drying(Moisture)<br>for feeds(135 ℃/2 h)                                                                             |                                                                                             |
|                        | 1. Scope : Moisture                                                                                                                        | 수분 0.1 %                                                                                    |
| AOAC 2003.05           | Animal feed - Crude fat in feeds                                                                                                           |                                                                                             |
|                        | 1. Scope : Crude fat(ethyl ether)                                                                                                          | 조지방 0.1 %                                                                                   |
| ISO 5984:2002          | Animal feed - Determination of crude ash                                                                                                   |                                                                                             |
|                        | 1. Scope : Crude ash                                                                                                                       | 조회분 0.1 %                                                                                   |



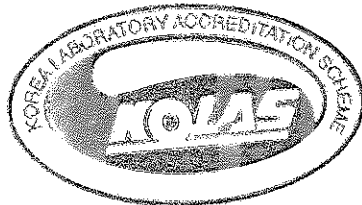


제384호 (9/9)

2.024 토양

| 규격번호                 | 규격명                   | 시험범위 및<br>검출한계 |
|----------------------|-----------------------|----------------|
| 환경부 고시<br>제2009-255호 | 토양오염공정시험기준 ES 07400.1 |                |
|                      | 금속류-원자흡수분광광도법         | Cu 0.01 mg/kg  |
|                      | 1. 적용범위 : 구리          |                |
|                      | 토양오염공정시험기준 ES 07400.2 |                |
|                      | 금속류-유도결합플라즈마-원자발광분광법  | Cd 0.03 mg/kg  |
|                      | 1. 적용범위 : 카드뮴         |                |

끝.



No.384(1/1)

## CERTIFICATE OF ACCREDITATION

Name of Laboratory : Foundation of Agri. Tech. Commercialization & Transfer

Representative : Jeon, Un-seong

Address of Headquarters : 211-2, Seodun-dong, Gwonson-gu, Suwon-si, Gyeonggi-do,  
Republic of Korea

Address of Laboratory : 225-2, Seodun-dong, Gwonson-gu, Suwon-si, Gyeonggi-do, Republic of Korea  
251, Seodun-dong, Gwonson-gu, Suwon-si, Gyeonggi-do, Republic of Korea

Duration : December 01, 2008 ~ November 30, 2012

Scope of Accreditation

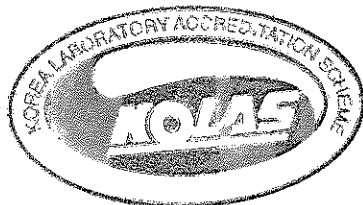
(Scope of Accreditation is described in the accompanying Annex)

**This testing laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).**

November 4, 2011

**Administrator,**

**Korea Laboratory Accreditation Scheme(KOLAS)**

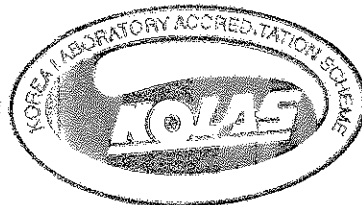


No.384(2/9)

# **1. Mechanical Test**

## **1.021 Automobile**

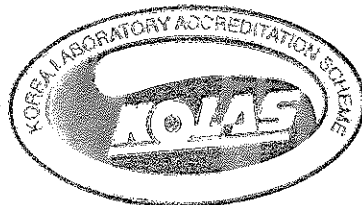
| Test method                                                     | Standard designation                                                                                                                                       | Test range or Limits of detection                                                                                                                                                                               |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| National Academy of Agricultural Science<br>Bulletin No. 2011-1 | Directive for agricultural machinery test and safety management<br>Annexed list 3 Test method of agricultural tractors                                     |                                                                                                                                                                                                                 |
|                                                                 | 6-1. Main PTO performance test                                                                                                                             | Max. power 400 kW<br>Max. PTO speed<br>4 500 r/min                                                                                                                                                              |
|                                                                 | 6-2. Drawbar power tests                                                                                                                                   | Max. drawbar pull 100 kN                                                                                                                                                                                        |
|                                                                 | 6-3. Hydraulic power and lift test                                                                                                                         | Max. lifting force 100 kN<br>Max. power 100 kW<br>Max. flow rate 250 L/min<br>Max. pressure 24 000 kPa                                                                                                          |
|                                                                 | 6-4. Braking performance test                                                                                                                              | Max. pedal force 600 N                                                                                                                                                                                          |
|                                                                 | 6-5. Turning radius                                                                                                                                        | Max. radius of turning circle 5.5 m                                                                                                                                                                             |
|                                                                 | 6-6. Center of gravity                                                                                                                                     | Max. angle 45°<br>Max. mass 12 000 kg                                                                                                                                                                           |
|                                                                 | 6-7. Noise test                                                                                                                                            | Max. sound level 94.0 dB                                                                                                                                                                                        |
|                                                                 | 6-8. Steering performance test                                                                                                                             | Max. steering force<br>170 N · m                                                                                                                                                                                |
|                                                                 | Directive for agricultural machinery test and safety management<br>Annexed list 3 Test method for roll over protective structures of agricultural tractors | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| ISO 789-1 : 1990                                                | Agricultural Tractors-Test Procedures-<br>Part 1 : Power Tests for Power Take-off                                                                          | Max. power 400 kW<br>Max. PTO speed<br>4 500 r/min                                                                                                                                                              |
| ISO 789-3 : 1993                                                | Agricultural Tractors-Test Procedures-<br>Part 3 : Turning and Clearance Diameters                                                                         | Max. radius of turning circle 5.5 m                                                                                                                                                                             |



No.384(3/9)

**1.021 Automobile(Cont.)**

| Test method        | Standard designation                                                                                                                      | Test range or Limits of detection                                                                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISO 789-11 : 1996  | Agricultural Tractors-Test Procedures-<br>Part 11 : Steering capability of wheeled tractors                                               | Max. steering force<br>170 N · m                                                                                                                                                                                |
| ISO 5700 : 2006    | Tractors for agriculture and forestry<br>-roll-over protective structures (ROPS)-<br>static test method and acceptance conditions         | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| ISO 12003-1 : 2008 | Agricultural and forestry tractors-<br>roll-over protective structures on<br>narrow-track wheeled tractors<br>Part 1 : Front-mounted ROPS | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| ISO 12003-2 : 2008 | Agricultural and forestry tractors-<br>roll-over protective structures on<br>narrow-track wheeled tractors<br>Part 2 : Rear-mounted ROPS  | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |



No.384(4/9)

**1.021 Automobile(Cont.)**

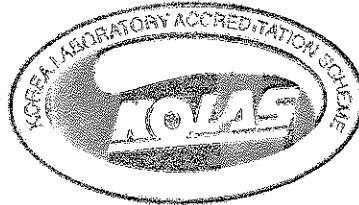
| Test method          | Standard designation                                                                                                                                                           | Test range or Limits of detection                                                                                                                                                                               |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OECD code 7 2 : 2011 | OECD standard code for the official testing of tractor performance                                                                                                             |                                                                                                                                                                                                                 |
|                      | 4.1. Power take-off and engine tests<br>4.1.1 Main power take-off<br>4.1.1.1 Maximum power test<br>4.1.1.2 Test at full load and varying speed<br>4.1.1.3 Test at varying load | Max. power 400 kW<br>Max. PTO speed<br>4 500 r/min                                                                                                                                                              |
|                      | 4.2. Hydraulic power<br>4.2.1 Test requirements<br>4.2.2 Compulsory steady state hydraulic pressure, flow, and power test-maximum available power                              | Max. drawbar pull 100 kN<br>Max. lifting force 100 kN<br>Max. power 100 kW<br>Max. flow rate 250 L/min<br>Max. pressure 24 000 kPa                                                                              |
|                      | 4.3. Hydraulic lift                                                                                                                                                            | Max. pedal force 600 N<br>Max. angle 45°                                                                                                                                                                        |
|                      | 4.4 Drawbar power and fuel consumption<br>4.4.1 Information about tests<br>4.4.2 Draw power and fuel consumption test, unballasted tractor                                     | Max. mass 12 000 kg<br>Max. steering force<br>170 N · m                                                                                                                                                         |
| OECD code 4 : 2011   | OECD standard code for the official testing of protective structures on agricultural and forestry tractors (static test)                                                       | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| OECD code 6 : 2011   | OECD standard code for the official testing of front -mounted protective structures on narrow-track wheeled agricultural and forestry tractors                                 | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |



No.384(5/9)

**1.021 Automobile(Cont.)**

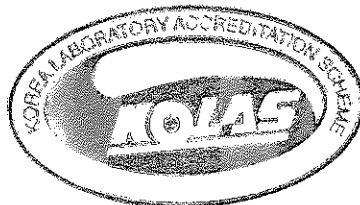
| Test method         | Standard designation                                                                                                                                                                  | Test range or Limits of detection                                                                                                                                                                               |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OECD code 7 : 2011  | OECD standard code for the official testing of rear-mounted protective structures on narrow-track wheeled agricultural and forestry tractors                                          | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| OECD code 8 : 2011  | OECD standard code for the official testing of protective structures on agricultural and forestry tracklaying tractors                                                                | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| OECD code 10 : 2011 | OECD standard code for the official testing of falling object protective structures on agricultural and forestry tractors                                                             | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| EEC 79/622 : 2007   | Council directive on the approximation of the laws of the member states relating to the roll-over protection structures of wheeled agricultural or forestry tractors (static testing) | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |



No.384(6/9)

**1.021 Automobile(Cont.)**

| Test method       | Standard designation                                                                                                             | Test range or<br>Limits of detection                                                                                                                                                                            |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EEC 86/298 : 2007 | Rear mounted roll-over protection structures of narrow-track wheeled agricultural and forestry tractors                          | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |
| EEC 87/402 : 2007 | Roll-over protection structures mounted in front of the driver's seat on narrow-track wheeled agricultural and forestry tractors | Max. static loading<br>Displacement 1 000 mm<br>Mass 10 000 kg<br>Max. crushing force<br>Displacement 750 mm<br>Mass 5 000 kg<br>Max. seat belt tensile force<br>Displacement 500 mm<br>Mass 1 000 kg, 5 000 kg |



No.384(7/9)

## 2. Chemical Test

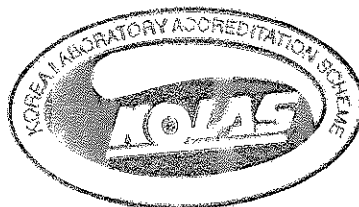
### 2.013 Miscellaneous Petroleum Products

| Test method      | Standard designation                                                                                                                | Test range or Limits of detection |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| KS E 3707 : 2001 | Determination of calorific value of coal and coke                                                                                   |                                   |
|                  | 8.b) Measurement by automatic calorimeter                                                                                           | Max. 33 500 J/sample              |
| EN 14918 : 2009  | Solid biofuels - Determination of calorific value                                                                                   |                                   |
|                  | 10. Gross calorific value                                                                                                           | Max. 33 500 J/sample              |
| ISO 1928 : 2009  | Solid mineral fuels - Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value |                                   |
|                  | 10. Gross calorific value                                                                                                           | Max. 33 500 J/sample              |

### 2.019 Agro-livestock Products

| Test method                                                                    | Standard designation                                                                                                       | Test range or Limits of detection                                           |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Rural Development Administration<br>Bulletin No. 2010-9                        | Method for quality test of fertilizer and sampling standards<br>Annexed list 1 Chemical test methods of fertilizer         |                                                                             |
|                                                                                | 1. Scope<br>Atomic absorption spectrometry : Zn, Cu<br>Inductively coupled plasma - Optical emission spectrometry : Cd, Cr | Cu 0.01 mg/kg<br>Zn 0.005 mg/kg<br>Cd 0.03 mg/kg<br>Cr 0.03 mg/kg           |
| Ministry for Food, Agriculture, Forestry and Fisheries<br>Bulletin No. 2009-14 | Official regulation of feed<br>Official method of feed analysis                                                            |                                                                             |
|                                                                                | IV. Minerals<br>16. Inductively coupled plasma<br>1. Scope<br>Ca, P, Fe, Zn, Cu, Mg                                        | Ca 0.1 %<br>P 0.1 %<br>Fe 1 mg/kg<br>Zn 1 mg/kg<br>Cu 1 mg/kg<br>Mn 1 mg/kg |
| Korea Food & Drug Administration<br>Bulletin No. 2011-62                       | Korean food standards codex 10.4.1.2<br>Multi class pesticide multiresidue methods                                         |                                                                             |
|                                                                                | Azoxystrobin, Procymidone                                                                                                  | Azoxystrobin 50 µg/kg<br>Procymidone 10 µg/kg                               |





No.384(8/9)

## 2.019 Agro-livestock Products(Cont.)

| Test method                                                        | Standard designation                                                                                                                                                                                                                                                                                                                                                  | Test range or<br>Limits of detection                                                                                             |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| National Academy of<br>Agricultural Science<br>Bulletin No. 2011-1 | Directive for agricultural machinery test<br>and safety management<br>Annexed list 3 Test methods of agricultural<br>product nondestructive sorting machine<br>5.2 Performance test<br>5-2-1-3 Measurement and investment<br>item<br>(1) Sort efficiency<br>(2) Precision<br>(A) Weight<br>(B) Size<br>(C) Sugar content<br>(D) Acidity content<br>(3) Transfer speed | Sugar content<br>(0 ~ 320) mg/g<br>Acidity content<br>(2 ~ 19.999) %<br>Size (0 ~ 200) mm<br>Weight (0 ~ 4 000) g<br>(0 ~ 20) kg |
|                                                                    | Directive for agricultural machinery test<br>and safety management<br>Annexed list 3 Test methods of low<br>temperature storeroom(below 50 m <sup>3</sup> )<br>5.2 Performance test<br>5-2-1. Insulation performance test of<br>storeroom<br>5-2-2. Temperature and humidity<br>control test of storeroom<br>5-2-3. Operating test of defrosting<br>heater            | Temperature<br>(-30 ~ 80) °C<br>Humidity<br>(5 ~ 98) % R.H.                                                                      |
|                                                                    | Directive for agricultural machinery test<br>and safety management<br>Annexed list 3 Test methods of Low<br>temperature storeroom(over 50 m <sup>3</sup> )<br>5-3. Test of performance<br>5-3-1. Insulation performance test<br>5-3-2. Temperature and humidity<br>control test<br>5-3-3. Performance test of defrosting                                              | Temperature<br>(-30 ~ 80) °C<br>Humidity<br>(5 ~ 98) % R.H.                                                                      |
|                                                                    |                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                  |
|                                                                    |                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                  |



No.384(9/9)

### 2.019 Agro-livestock Products(Cont.)

| Test method   | Standard designation                                         | Test range or Limits of detection |
|---------------|--------------------------------------------------------------|-----------------------------------|
| AOAC 930.15   | Animal feed - Loss on drying(Moisture) for feeds(135 °C/2 h) |                                   |
|               | 1. Scope : Moisture                                          | Moisture 0.1 %                    |
| AOAC 2003.05  | Animal feed - Crude fat in feeds                             |                                   |
|               | 1. Scope : Crude fat(ethyl ether)                            | Crude fat 0.1 %                   |
| ISO 5984:2002 | Animal feed - Determination of crude ash                     |                                   |
|               | 1. Scope : Crude ash                                         | Crude ash 0.1 %                   |

### 2.024 Soil

| Test method                                      | Standard designation                                     | Test range or Limits of detection |
|--------------------------------------------------|----------------------------------------------------------|-----------------------------------|
| Ministry of Environment<br>Bulletin No. 2009-255 | Standard test method for soil pollution : ES 07400.1     |                                   |
|                                                  | Metals - Atomic absorption spectrometry<br>1. Scope : Cu | Cu 0.01 mg/kg                     |
|                                                  | Standard test method for soil pollution : ES 07400.2     |                                   |
|                                                  | Metals - Inductively coupled plasma<br>1. Scope : Cd     | Cd 0.03 mg/kg                     |

End.