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Acid Number (AN) Standards & Base Number (BN) Standards from Paragon Scientific

Paragon Scientific manufacture Acid Number (AN) standards and Base Number (BN) standards, which are used for the verification of analytical instruments used to determine acid number or base number by potentiometric titration. Both the AN standards and BN standards are dual certified to **ISO 17025 & ISO 17034** under our UKAS accreditation.



Acid Number Background

The Acid Number (AN), sometimes referred to as Total Acid Number (TAN), is a measurement of acidity in a sample, determined by the quantity of potassium hydroxide in milligrams per gram of sample that is required to neutralise the acidic constituents in petroleum products, lubricants, biodiesels and biodiesel blends.

The acid number is an important measurement in the quality control of petroleum products during the manufacturing process. The acid number can also be used to assess the quality of in use lubricants, as a lubricant degrades through usage, it can be seen that the quantity of acidic constituents will increase. The acid number is not a means of predicting the corrosive properties of a material, due to the fact that it does not differentiate between the differing types of acidic constituents, however, any increase in acid number could cause other negative effects such as viscosity increase and the formation of gums and resins in the material. It is these effects that could cause failure of components in a lubricating system, through wear / damage.

Base Number Background

The Base Number (BN), sometimes referred to as Total Base Number (TBN), is a measurement of basicity in a sample, determined by the quantity of acid, expressed in terms of the equivalent number of milligrams per gram of potassium hydroxide to neutralise the basic constituents in petroleum products.

The base number is an important measure in the quality control of petroleum products, such as those used in the motor and marine industry, and is a measure of the oils ability to neutralise acid products that can be produced through normal usage. The base number can also be used to assess the quality of in use lubricants. As the base number decreases, the lubricants ability to neutralise the acidic products decreases, this will indicate the need for lubricant changes.



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Part of Paragon Scientific's ISO/IEC 17025 and ISO/IEC 17034 Accreditation

Acid Number (AN) and Base Number (BN) standards from Paragon Scientific

Both acid number and base number testing require robust analytical data, so it is paramount for laboratories to calibrate and verify their titration equipment and the technicians who operate these. The use of high quality CRMs certified to ISO 17025 and ISO 17034 is critical to ensuring confidence of the measurement results achieved.

Paragon Scientific's Acid Number (AN) and Base Number (BN) standards are certified in strict accordance with international test method protocols, ASTM D664 / IP 177 (AN) and ASTM D2896 / IP 276 (BN). Manufacture and certification is carried out in strict accordance with Paragon Scientific's dual United Kingdom Accreditation Service (UKAS) accreditations of ISO 17025 and ISO 17034. This dual accreditation allows us to ensure the highest level of accreditation guarantee and provides the most credible certified data available worldwide.

Paragon Scientific is able to offer both the Acid Number (AN) and Base Number (BN) range of standards in single volume packs or as a triple pack. All packs are supplied in tamper-evident glass packaging providing assurance of sample integrity.

Key Benefits:

- Certified in strict accordance to ISO 17025 and ISO 17034 under our UKAS accreditation.
- Highest level of accreditation guarantee, providing the most credible certified data available worldwide.
- Typically used in, but not limited to, the analysis of used oils and lubricants
- Acid Number (AN) standards are tested and certified in strict accordance with: ASTM D664 / IP 177
- Base Number (BN) standards are tested and certified in strict accordance with: ASTM D2896 / IP 276
- Fully traceable to international standards and low levels of uncertainty achieves maximum accuracy of data.
- Supplied in tamper-evident glass packaging, providing assurance of sample integrity.
- Available as a single or triple pack
- Manufactured in the United Kingdom
- 24 month shelf life

Acid Number (AN) Standards

| Part Number | Description |
|-------------|--|
| TAN001 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 0.1 mg KOH/g, 125 g |
| TAN001/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 0.1 mg KOH/g, 3 x 125 g |
| TAN005 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 0.5 mg KOH/g, 125 g |
| TAN005/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 0.5 mg KOH/g, 3 x 125 g |
| TAN010 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 1.0 mg KOH/g, 125 g |
| TAN010/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 1.0 mg KOH/g, 3 x 125 g |
| TAN015 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 1.5 mg KOH/g, 125 g |
| TAN015/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 1.5 mg KOH/g, 3 x 125 g |
| TAN020 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 2.0 mg KOH/g, 50 g |
| TAN020/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 2.0 mg KOH/g, 3x50 g |
| TAN025 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 2.5 mg KOH/g, 50 g |
| TAN025/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 2.5 mg KOH/g, 3 x 50 g |
| TAN030 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 3.0 mg KOH/g, 50 g |
| TAN030/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 3.0 mg KOH/g, 3 x 50 g |
| TAN050 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 4.57 mg KOH/g, 50 g |
| TAN050/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 4.57 mg KOH/g, 3 x 50 g |
| TAN100 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 10.14 mg KOH/g, 50 g |
| TAN100/3 | UKAS ISO 17025 / ISO 17034 Certified, Acid Number Standard, Certified Value 10.14 mg KOH/g, 3 x 50 g |

Base Number (BN) Standards

| Part Number | Description |
|----------------|--|
| TBN1 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 1 mg KOH/g, 125 g |
| TBN1/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 1 mg KOH/g, 3 x125 g |
| TBN3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 3 mg KOH/g, 50 g |
| TBN3/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 3mg KOH/g, 3 x 50 g |
| TBN10 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 10 mg KOH/g, 50 g |
| TBN10/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 10 mg KOH/g, 3 x 50 g |
| TBN15 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 15 mg KOH/g, 50 g |
| TBN15/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 15 mg KOH/g, 3 x 50 g |
| TBN30 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 30 mg KOH/g, 50 g |
| TBN30/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 30 mg KOH/g, 3 x 50 g |
| TBN40 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 40 mg KOH/g, 50 g |
| TBN40/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 40 mg KOH/g, 3 x 50 g |
| TBN6 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 6.0 mg KOH/g, 50 g |
| TBN6/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 6.0 mg KOH/g, 3 x 50 g |
| TBN70 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 70 mg KOH/g, 50 g |
| TBN70/3 | UKAS ISO 17025 / ISO 17034 Certified, Base Number Standard, Certified Value 70 mg KOH/g, 3 x 50 g |

Why choose Paragon?

All of Paragon's products have been manufactured to the highest certification integrity coupled with premium quality. Every certificate provides low levels of uncertainty of measurement and is fully traceable to international methodology. With an excellent reputation across multiple industries, Paragon provides excellent customer service, technical support and prompt delivery to all its customers.

Paragon Scientific has always sought to certify its products to the highest metrological level it can achieve, this has been one of its key objectives since the company was founded and has set them apart from other reference material producers.

Integrity and Quality has and always will be at the forefront for Paragon Scientific, which is evidenced by their accreditations to ISO 17025 and ISO 17034 under UKAS and the long-standing relationships with end-users and the worldwide partners they work with. Integrity and Quality are embedded across all their business activities and provides the framework in how they approach new ideas and operate.

For further information, please feel free to contact our team at sales@paragon-sci.com or contact your local representative.

