



PELLET PRESS PP 40

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Solid, high-quality pellets are an important precondition for reliable and meaningful XRF analysis. With the PP 40, RETSCH offers a pellet press which produces strong pellets with a smooth surface. The PP 40 features individual pressure force regulation in the range of 0 to 40 t. It combines the advantage of a small benchtop unit with high press forces, which are built up automatically in three steps, ensuring that even difficult materials are pressed perfectly.

- | az yer kaplayan tezgah üstü model
- | 40 ton'a kadar basınç ayarlama özelliği
- | Çelik kalıplarda, alüminyum kaplarda sıkıştırma işlemi
- | Farklı çaplarda, basınç aparatları
- | Rutin uygulamalar için 10 SOP tanımlanabilir ve saklanabilir
- | ekran üzerinden rahat parametre ayarı
- | Otomatik basınç güç kontrolü

STABILIZING PRESSED PELLETS

Applying, for example, forces of 10 tons, 20 tons, and 30 tons in sequential steps, each with a 20-second hold time, proves advantageous for pellet stability as particles have sufficient time to settle. Pressing the pellets in aluminum cups further augments their stability. Should these measures prove inadequate, incorporating a binder, such as Licowax, offers an effective stabilization method for challenging samples, including metal powders. Typically, a mixture of 10-15 g of the sample with 2 g of Licowax, pressed in three stages as outlined above, yields optimum results. For the mixing process, the Mixer Mill MM 400, equipped with an adapter for holding 8 conical centrifuge tubes, is highly effective. It ensures that samples are mixed uniformly, automatically, and reproducibly.



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APLIKASYON ÖRNEKLERİ



Wood 4g
Particle size 0.25 mm
Pressing tool 32 mm
20 s each at 10/20/30 tons



Cellulose 7 g
Particle size 0.15 mm
Pressing tool 40 mm
Aluminum cups 40 mm
30 s each at 10/20/30 tons



Slag 40 g
Particle size 0.25 mm
Pressing tool 40 mm
20 s 20 tons



FeSiMg-Granulate 12 g
plus 2 g licowax
Particle size 0.10 mm
Pressing tool 40 mm
Aluminum cups
60 s 15/25/35 tons

3 RECOMMENDATIONS TO OBTAIN RELIABLE XRF RESULTS

1. **Particle size reduction**

Pulverize the sample into a fine powder of < 100 µm or less, depending on the element to be detected, before pressing it into a pellet. This size reduction helps mitigate matrix effects, including grain size and texture variations, which can distort XRF results.

2. **Uniformity and homogeneity**

Press the sample into a pellet to ensure uniformity and homogeneity. This is crucial for XRF analysis which relies on consistent interaction between the X-rays and the sample to produce accurate and reproducible results. Homogeneity guarantees that the results represent the entire sample.

3. **Enhanced analytical precision and accuracy**

Create a dense and uniform pellet with a smooth and flat surface to enhance precision and accuracy of the XRF analysis. A smooth surface ensures consistent X-ray penetration and reduces the scatter, thereby improving the quality of the analytical results.

BENEFITS OF PELLET PRESSING FOR XRF ANALYSIS

Due to its ability to produce homogeneous, stable, and accurate samples efficiently and cost-effectively, pellet pressing is a widely adopted method for preparing samples for XRF analysis.

1. **Stability and handling**

Pellets are more stable and easier to handle compared to loose powders. This stability is particularly important for samples that might be hygroscopic or prone to segregation. Once pressed, the pellet can be easily placed into the XRF instrument for analysis without the risk of sample loss or contamination.

2. **Minimum use of chemicals**

Compared to other sample preparation methods such as fusion, pellet pressing requires no or minimal additional chemicals. This reduces the risk of introducing contaminants that could interfere with the analysis.

3. Cost-Effectiveness

Pellet pressing is a relatively simple and cost-effective method of sample preparation, especially when compared to more complex methods such as fusion. The fact that it requires less specialized equipment and consumables makes it an attractive option for any laboratory.

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TEKNİK VERİ

Uygulamalar	Spektral analiz için palet hazırlama
Uygulama alanı	inşaat malzemesi ..., kimya / plastik
Maksimum basınç	40 t, otomatik pres
Basınç	0 - 40 t (1 - 400 kN)
Basınç güç artışı / sabit tutma	sabit rampa/ 1-99 sn / sabit rampa
Parametre kombinasyonları	10
Steel rings (external Ø / internal Ø)	40 mm / 32 mm (max. pressure force 15 t) 40 mm / 35 mm (max. pressure force 15 t) 51.5 mm / 35 mm (max. pressure force 30 t)
Aluminium cup (external Ø)	32 mm (max. pressure force 25 t) / 40 mm (max. pressure force 40 t)
Elektriksel veriler	100-120 V, 50/60 Hz; 220-240 V, 50/60Hz
Güç bağlantısı	1-faz
G x Y x D	335 x 495 x 570 mm
Net ağırlık	120 kg
Standartlar	CE

FONKSIYON PRENSIBI

Çelik halka veya alüminyum kap, PP 40'in pres aletine yerleştirilir ve bir huni aracılığıyla numune malzeme ile doldurulur. Tam sürgü daha sonra baskı plakasının altına itilir ve presleme başlatılır. Basınç oluşumu sırasında tozun yoğunluğu artar. Parçacıklar arası yapışma kuvvetlerinin tam olarak gelişmesine izin vermek ve böylece maksimum stabiliteyi garanti etmek için maksimum basınç kuvveti belirli bir süre boyunca tutulmalıdır. Üç adıma kadar basmak, örn. artan basınç kuvveti, stabil peletlerle sonuçlanır.

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SIPARIŞ BİLGİSİ

(lÜtfen pres aletini ayrıca sipariş edin)

20.757.0001  PP 40 110-120 V, 50/
60 Hz

EVACUABLE PRESSING TOOLS FOR PELLET PRESS PP 40

22.458.0018		Çelik halkalar için presleme aleti 40 mm dış Ø, 32 mm iç Ø
22.458.0019		Çelik halkalar için presleme aleti 40 mm dış Ø, 35 mm iç Ø
22.458.0028		Pressing tool for steel rings 51.5 mm outer Ø, 35 mm inner Ø
22.458.0020		Ø 32 mm alüminyum kalıplar için presleme aparatı (serbest presleme için de uygundur)
22.458.0021		Ø 40 mm alüminyum kalıplar için presleme aparatı (serbest presleme için de uygundur)

AKSESUARLAR PP 40

22.458.0003		 Çelik halka 40 mm dış Ø, 32 mm iç Ø, 1 adet
22.458.0004		 Çelik halka 40 mm dış Ø, 35 mm iç Ø, 1 adet
22.458.0005		 Çelik halka 51,5 mm dış Ø, 35 mm iç Ø, 1 adet
22.005.0001		 Alüminyum kalıplar, eğimli duvarlar, 32 mm çaplı peletler için, 1000 adet
22.005.0002		 Aluminum cups, sloping walls, for pellets with 40 mm diameter, 1000 pieces
22.458.0006		 Alüminyum kalıplar, düz duvarlı, 40 mm çaplı peletler için, 1000 adet
22.868.0003		Ø 32 mm ve Ø 40 mm alüminyum kalıplar için tokmaklı huni tüpü
22.458.0025		Extraction tool 56 x 32 mm
22.440.0001		 Licowax® C mikro tozu, 250 g (çelik halkalar için değil)

22.440.0003



Spektromelt® C20, selüloz tabletler, 5 kg